

LOVE IS UNIVERSAL BUT STILL CULTURALLY SPECIFIC: A  
MODEL FOR UNDERSTANDING HEALTHY RELATIONSHIP  
FUNCTIONING IN INTERCULTURAL ROMANTIC COUPLES

by

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## ABSTRACT

Interracial heterosexual romantic relationships have increased in the U.S. population. Studies on interracial romantic relationships have reported higher rates of conflict, tension, stress, dissatisfaction, and long-term instability. Most studies have studied interracial couples using categorical responses of race and ethnicity yet, this limits theoretical understanding to the characteristics that make-up high quality relationships. This study represents the first attempt to explore how similarities and differences between intercultural romantic partners (i.e., partners coming from different racial, ethnic, language, and/or religious backgrounds) in culturally-based emotional attitudes and relationship goals predict effective or ineffective interpersonal emotional processes, and in turn relationship quality by testing a newly developed model called the Culturally-Based Romantic Relationship (CBR<sup>2</sup>). To test this model, 40 intercultural romantic couples were recruited from the Southwestern region of the U.S. and were asked to complete a couple's lab session. Couples completed four-video recorded emotional conversations while their physiological responses were captured. Overall, the results provide partial support for certain paths in the CBR<sup>2</sup> model. Theoretical models of this nature are highly essential because they can impact policy and programs that are developed for various groups of people.

*Keywords:* culture, emotions, regulation, couples, relationship quality

## CHAPTER I: INTRODUCTION

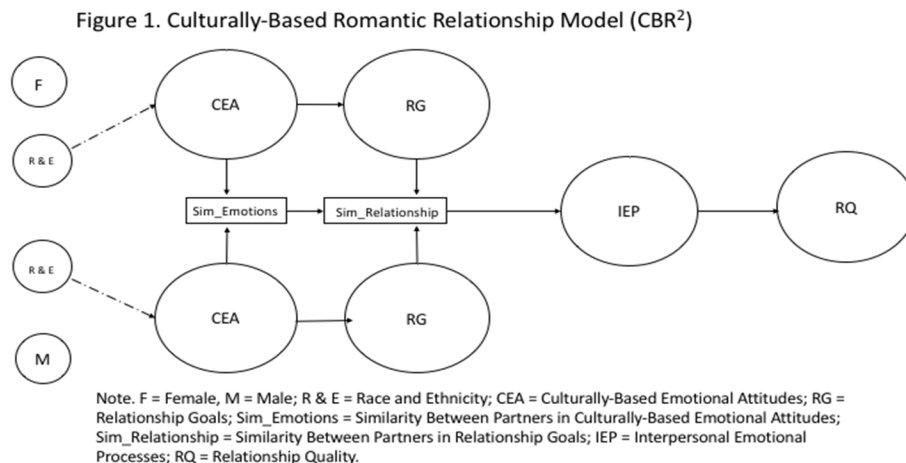
Interracial romantic relationships have increased in the U.S. population, with couples from different racial backgrounds now making up 8.5% of all marriages (U.S. Census Bureau, 2010). Many studies on interracial romantic relationships have reported higher rates of conflict, tension, stress, dissatisfaction, long-term instability, and higher probability of separation and divorce in comparison to same-race couples (Bratter & King, 2008; Brummett & Steuber, 2015; Schlabach, 2013). These studies suggest that interracial romantic relationships are burdened with more problems than same-race couples. One limitation, however, is that most studies have measured interracial romantic relationships using categorical responses of race or ethnicity. Although race (i.e., individual's phenotypic identification) and ethnicity (i.e., an individual's social identification) are important factors to consider when studying interracial romantic relationships, these constructs do not explicitly help us understand the psychological elements, such as beliefs and values, that contribute to interracial romantic functioning.

One approach to understanding interracial relationship functioning is to focus on cultural similarities or differences between mixed-race partners, or in other words intercultural romantic couples (i.e., romantic partners from different racial, ethnic, language and/or religious backgrounds) (Bystydzienski, 2011; Ho, 1990). Culture is a shared understanding or a common way of living where individuals acquire cultural knowledge to participate as members of the group through adopted attitudes, beliefs, customs, norms, roles, and values learned from direct and indirect systems (e.g., family, media, etc.) (Matsumoto et al., 2008). By incorporating the conceptualization and measurement of specific psychological elements of culture, we could begin to address a wide range of topics that may be relevant to mixed-culture relationship functioning, including cultural differences in emotions and their interpersonal emotional



processes, cultural differences in romantic attitudes, and cultural differences in formation and maintenance of romantic relationships (i.e., relationship quality). More so, when we begin to define and examine intercultural romantic relationships in terms of psychologically relevant elements, such as beliefs and values, we can begin to test the hypothesis that love is universal and that race/ethnicity do not matter as long as partners can agree on what love is and what form their relationship should take.

The study advances theory related to culture, emotions, interpersonal emotional processes, and relationship quality by testing a Culturally-Based Romantic Relationship (CBR<sup>2</sup>) model in heterosexual intercultural romantic couples. This model suggests that similarities in culturally-based emotional attitudes (referenced as Sim\_Emotions) and relationship goals (referenced as Sim\_Relationship) contribute to successful intercultural relationships, while differences in culturally-based emotional attitudes and relationship goals contribute to less satisfying intercultural relationships. It should be noted that this model may be applicable to same-race couples as well if the partners hold opposing cultural values. This model is unique in that it combines the ideas of how culture shapes emotions and relationship goals, and thus interpersonal emotional processes, which are important properties of relationship functioning (see Figure 1).



Empirical studies demonstrate that cultural ideas and practices shape emotions in various aspects of life including the emotions we ideally want to feel (i.e., ideal affect) and when, where, and how we should express those emotions (i.e., display rules) (Ekman et al., 1987; Tsai, 2007). This evidence is based primarily on comparing Western and East-Asian differences, and generally suggests that Western cultures encourage greater expression of emotions and high-arousal affective experiences, whereas East-Asian cultures place a greater emphasis on social harmony and value low-arousal affective experiences (Matsumoto et al., 2008; Mesquita & Frijda, 1992; Tsai, 2007; Tsai et al., 2006). The CBR<sup>2</sup> model incorporates these findings with the construct of culturally-based emotional attitudes.

Additionally, recent studies demonstrate that cultural ideas and practices shape how close relationships are acted out in terms of expressing love, ways of approaching conflict, and describing what embodies a romantic relationship (Beichen & Murshed, 2015; Cionea, Johnson, Bruscella, & Van Gilder, 2015; Dion & Dion, 1996; Drahanovic & Hasanagic, 2014). Again, this evidence is based primarily on comparing Western and East-Asian samples, and generally suggests that Western cultures stress the importance of love before marriage, express love through affectionate touch, have clear guidelines of extended family involvement to relationship matters, and prefer direct approaches to conflict, whereas East-Asian cultures place higher value on family approval for permanent unions, express love through inexplicit behaviors, and prevent face-to-face embarrassment and conflict interactions (Cionea et al., 2005; Kito, Yuki, & Thompson, 2017; Muramaya et al., 2015; Till & Barker, 2015; Zeng et al., 2016). The CBR<sup>2</sup> model incorporates these cultural ideas with the construct of relationship goals.

Culturally-based emotional attitudes and relationship goals may be the deep-seated psychological elements that form the foundation of interpersonal relationships and lifestyle

choices. Research on human motives suggests that the goals people seek to attain reflect the emotions they want to feel and believe should be expressed (Adams, 2004; Billari & Liefbroer, 2016; Emmons & Kings, 1988). These goals operate on a person's behaviors usually outside their conscious awareness, drawn from stored memories that shape relationship dynamics with others (Planalp, 2003). Culturally-based emotional attitudes are intensely social in that they determine how one will react towards a social partner and in relationship situations in the future (Baumeister, Vohs, DeWall, & Zhang, 2007; Billari & Liefbroer, 2016). Therefore, relationship goals are highly influenced by the sum of all the culturally transmitted emotional beliefs, ideas, and expectations of what emotional processes characterize a functioning romantic relationship (Flecher, Simpson, Thomas, & Giles, 1999; Illouz & Finkelmann, 2009; Impett et al., 2010; Mercer, 2010; Teunissen & Bok, 2013). Constant evaluation of desired feelings and expression of emotions motivate relationship goal-seeking behaviors and affect relationship experiences and outcomes (Flecher et al., 1999). The CBR<sup>2</sup> model focuses on cultural differences in the evaluation of desired feelings and expression of emotions as motivators of relationship goal-relevant behaviors and how they affect relationship experiences and outcomes.

A separate line of research has suggested that culturally-based emotional attitudes help individuals to predict what others will do in social situations and how they themselves will respond, with frequent positive emotional engagement gradually leading to collaborative activities and shared goals (Chartrand, Dalton, & Fitzsimons, 2006; Rusbult & Van Lange, 2003). These studies suggest that sharing similar relationship goals between partners, whether deliberately or unintentionally, may be highly interconnected with shared emotions, which provide the soil for a high degree of intimacy and stability (i.e., relationship quality) to flourish (Emmons & King, 1988; Rusbult & Van Lange, 2003).

This idea is central and remarkably apparent in intimate relationships, where high levels of emotional interdependence between partners support shared goals and satisfying relationships. Studies have suggested that wanting different things in a relationship (e.g., children, priorities, commitment, etc.) will often challenge the stability of the relationship (Weigel et al., 2017). A major contribution of the CBR<sup>2</sup> model is to suggest how similarities or differences in emotional attitudes and relationship goals converge to influence interpersonal emotional processes. Interpersonal emotional processes include: (1) perception of responsiveness from partner (i.e., how effective partners are at responding to each other's emotional disclosure), (2) own emotion regulation strategies (i.e., how effective individuals are at the use of interpersonal emotion regulation strategies), (3) partner's effectiveness in using similar strategies (i.e., perception of how effective partners are at the use of similar interpersonal emotion regulation strategies), (4) physiological arousal (i.e., heart rate and electrodermal activity) and (5) emotional synchrony (i.e., emotional coordination between partners).

For example, research on stable and happy romantic couples has found that partners who are able to detect and respond to their partner's emotions are likely to share similar personality traits and thereby report greater emotional support and relationship satisfaction (Finkel, Slotter, Luchies, Walton, & Gross, 2013; Finkenauer, Meij, Reis, & Rusbult, 2010; George et al., 2015). Other empirical research also suggests that similar goals, particularly in intimate relationships (e.g., parent-child, friends, romantic partners), are related to effective use of interpersonal regulation strategies and thus, increased interpersonal trust (Mund, Finn, Hagemeyer, & Neyer, 2016; Reeck, Ames, & Ochsner, 2017). In a related manner, further studies have found that the use of effective interpersonal emotion regulation strategies is dependent on what is considered culturally appropriate and inappropriate, which in turn impacts perception of effectiveness from

others, physiological reactivity and synchrony between partners (Ramsey & Gentzler, 2015; Randall, Corkery, Duggi, Kamble, & Butler, 2012; Timmons, Margolin, & Saxbe, 2015; Tsai & Levenson, 2003; Tsai, Levenson, & McCoy, 2006; Yuan et al., 2015). In addition, studies generally suggest that happy and satisfied couples tend to display more effective responses, lower physiological arousal and faster recovery during conflict discussions, while greater probability of separation and divorce is found in those who are less flexible in emotionally responding to each other and less able get out negative emotional states during conflict interactions (Balzarotti, Biassoni, Colombo, & Ciceri, 2017; Cartensen et al., 1995; Gottman & Levenson, 1992; Gottman & Levenson, 1999; Levenson & Gottman, 1983). Interpersonal emotional events that are accompanied by higher arousal generate a force that degrades the quality of the relationship (Adams, 1994; Asano, Ito, & Yoshida, 2016; Emmons & Kings, 1988). Consequently, differences between partners in culturally-based emotional attitudes and relationship goals may generate interpersonal tension and emotional disconnection because each partner holds different expectations about how partners should behave and how relationships should be acted out, which in turn may lead to poor relationship quality.

The present study provides an initial test of the CBR<sup>2</sup> model and examines heterosexual romantic couples who were in an intercultural relationship. Participants were asked to complete an online baseline questionnaire where similarities/differences in culturally-based emotional attitudes and relationship goals between partners were measured. Following this, couples attended a lab session where they went through a series of four video recorded emotional conversations while physiological responses (e.g., heart rate and electrodermal activity) were recorded. After each conversation, both partners completed a short questionnaire rated their own emotions, perceptions of responsiveness to positive and negative emotional disclosures from

partner, and own use of three interpersonal emotion regulation strategies and perception of their partner's effectiveness in using these same strategies. After all tasks were completed, participants individually watched their video-recorded interactions and rated how they remembered feeling during these conversations using a bipolar rating dial (positive and negative emotion). The CBR<sup>2</sup> model proposes that similarity between partners in emotional attitudes and relationship goals will be related to effective interpersonal emotional processes in the lab and the highest level of relationship quality. In contrast, differences between partners in emotional attitudes and relationship goals are expected to be related to ineffective interpersonal emotional experiences in lab and the lowest levels relationship quality.

In summary, the first section below provides a theoretical overview of the significance of studying intercultural romantic couples and describes how culture was conceptualized in this study. I then provide evidence of how culture shapes and influences different emotional attitudes and relationship goals, how similarities in culturally-based emotional attitudes between partners are linked to similar shared goals, and how similar shared goals between partners contribute to effective interpersonal emotional processes. From here, I describe each interpersonal emotional process of the model and provide a general understanding of each process found across satisfied and dissatisfied couples. Following that, I present my predictions of how differences in relationship goals may contribute to less effective interpersonal emotional processes and poor relationship quality. Overall, the CBR<sup>2</sup> model focused on theoretically explaining and predicting why certain relationships flourish or perish within-and-between cultures, by going far beyond race and ethnicity and closer to the psychological elements of subjective culture.

## CHAPTER II: LITERATURE REVIEW

### **The Importance of Studying Interracial/Intercultural Romantic Relationships**

Race and ethnicity continue to be powerful factors in shaping social relationships, given the long history of social and racial stratification of the U.S (“Key facts about race and marriage, 50 years after the Loving v. Virginia,” 2012). More specifically, race refers to phenotypic differences between people (i.e., skin color, hair texture, etc.) (Kim & Han'guk, 1994; Taras, Rowney, & Steel, 2009). Ethnicity refers to an individual’s affiliation with a common ancestry, usually in terms of geographic region and membership, language, and religion (Fajans, 2006; Markus & Kitayama, 1991; Triandis, 1989; Taras et al., 2009; William & Husk, 2013). Currently, the U.S. is one of the most racially and ethnically diverse nations. A little over 50 years after interracial marriages became legal across the U.S., the share of marriages to a spouse of a different race or ethnic group has increased more than five times – from 3% in 1970 to 17% as of 2017 (“Intermarriage in the U.S. 50 years after Loving v. Virginia,” 2017).

Although all romantic relationships are complex, studies suggest that interracial romantic couples are at greater risk of experiencing higher tension, stress, conflict, dissatisfaction, instability, and separation/divorce than same-race couples (Bratter & King, 2008; Brummett & Steuber, 2015; Kposowa, 1998; Schlabach, 2013). However, these results cannot speak to processes given that most studies have measured interracial romantic relationships using categorical responses of race and ethnicity (Blount & Young, 2015; Kalmijn, 2010; Kim, Prouty, & Roberson, 2012; Morgan, 2012; Seshadri & Knudson-Martin, 2013; Waldman & Rubalcava, 2005). Although race and ethnicity are important factors to consider when studying interracial romantic relationships, these constructs do not explicitly help us understand the psychological elements, such as beliefs and values, that contribute to relationship functioning. One approach to

understanding relationship functioning in mixed-race couples is to focus on cultural similarities or differences between partners, or in other words intercultural romantic couples (Ho, 1990).

To do so, I developed the Culturally-Based Romantic Relationship model or the CBR<sup>2</sup> which is focused on the success of emotional bonds between romantic partners. The CBR<sup>2</sup> is based on the strong conviction that what contributes to healthy functioning relationships can be learned by focusing on the subjective elements of culture in intercultural romantic couples, rather than interracial or interethnic differences. In this model, intercultural couples are defined as romantic partners from different racial, ethnic, language and/or religious backgrounds (Ho, 1990). The CBR<sup>2</sup> proposes that focusing on intercultural couples may assist us in capturing cultural factors that are central to race/ethnicity, but also provide greater insight into the psychological elements of why and how culture matters in a romantic context. This model is unique in that culture is thought of as a direct psychological factor that effects ideal relationship functioning (i.e., relationship quality) in close relationships. At the same time, the CBR<sup>2</sup> proposes that same-race couples may also be susceptible to relationship dissolution if partners hold different interpretations and ideals of relationship functioning, even though they come from similar racial or ethnic groups. Overall, the goal of the CBR<sup>2</sup> is to further understand and disentangle the powerful complexity of culture and emotions in close relationships.

### **Culturally-Based Emotional Attitudes**

Emotions include subjective, physiological, and behavioral components (Mulligan & Scherer, 2012). Although compelling evidence suggests that some aspects of emotions have evolved similarly for all humans (Ekman, 1988), and every individual can express and feel a wide range of emotions, new findings teach us that emotions are culturally defined (Boiger & Mesquita, 2012; Matsumoto et al., 2008; Mesquita & Fridja, 1992). Culture affects the types of



emotions we ideally want to experience (i.e., ideal affect), and teaches us when, where, and how to appropriately express them (i.e., display rules) (Matsumoto, 2007; Matsumoto et al., 2008; Tsai, 2007).

**Ideal affect.** More specifically, empirical studies indicate cultural differences in ideal affect when comparing Western and East-Asian participants. For example, European Americans have reported wanting to experience high-arousal emotions (e.g., excitement and enthusiasm), while East-Asian participants report wanting to experience low-arousal emotions (e.g., calmness and serenity) (Tsai, Knutson, & Fung, 2006). Studies have also found evidence for the social learning of ideal affect. For example, American mothers displayed a preference for high-arousal interactions with babies through chatting and playing, whereas Japanese mothers displayed a preference for low-arousal interactions with babies through calming and soothing behaviors (Caudill, 1972; Kanaya, Nakamura, & Miyake, 1989). Moreover, Miyamoto and colleagues (2014) found that Asian Americans expressed lower motivation to down-regulate negative emotions a day after experiencing a negative online event than European Americans (Miyamoto, Ma, & Peterman, 2014). In the context of romantic relationships, regardless of the severity of topic discussed, European American couples displayed greater high-arousal emotional expressions such as humor and happiness in comparison to Chinese American couples (Tsai, Levenson, & McCoy, 2006).

Going beyond Eastern and Western contrasts, researchers have found that Russians often immerse themselves in negative feelings by persistently brooding over events. After reflecting over a negative event, Russians report less distress and more adaptive patterns of construal than Americans (Grossman & Kross, 2010). As another example, Israeli couples have been found to display more high-arousal negative emotions than American couples, such as verbal aggression

during conflict, and African American couples have been found to display more engagement in negative verbal disputes than European American couples (Orbuch, Veroff, Hassan, & Horrocks, 2002; Orbuch, Veroff, & Holmberg, 1993; Winkler & Doherty, 1983). In summary, extensive evidence shows that cultures differ in what is considered ideal affect and this can be associated to interpersonal behaviors in romantic relationships.

**Display rules.** Similarly, research also confirms differences between Western and East-Asian participants in emotional expression. For example, Japanese participants have been found to express less negative emotions such as fear, anger, and disgust both alone and in the presence of others in comparison to European Americans (Matsumoto, 1990). In a tedious laboratory counting task, Asian Americans were found to experience and express less intense anger than European Americans (Mauss, Butler, Roberts, & Chu, 2010). Likewise, studies have found higher emotional expressivity in more individualistic societies (e.g., US, Australia, Canada, etc.) than collectivist ones (e.g., Hong Kong, Russia, Greece, etc.) (Matsumoto et al., 2008). Suh (2000) found that Westerners often feel strong pressure to express positive emotions, compared to East-Asian participants. Likewise, Safdar and colleagues (2009) found that East-Asians reported higher inappropriateness of expressing happiness in several social interactions in comparison to Westerners.

Moreover, the high valuing of collectivism, which is commonly fostered in East-Asian cultures, has been associated with greater suppression of emotions (Matsumoto, Yoo, & Nakagawa, 2008). Another study found that Indian children reported lower expression of anger, sadness and pain than American children, and American children reported a greater desire to communicate felt emotions (Wilson et al., 2012). In this same study, Indian children reported a greater desire to maintain social norms as reasons to not express anger and sadness (Wilson et

al., 2012). Additional studies on this topic have found that Korean children report viewing aggressive behaviors as more negative, and peer exclusion of aggressive children was reported as more legitimate in Korean than American children (Killen & Brenick, 2011). In the context of romantic relationships, studies have found that Asian couples display more passive emotional expressions when discussing problems, while European American couples report more direct and verbally explicit emotional expressions (Skoworonski et al., 2014). Overall, findings collectively suggest that differences in ideal affect and display rules are learned aspects of culture. Culture is therefore an essential part of individual's lives and social relationships.

### **Relationship Goals Vary Across Cultures**

Romantic love is a universal experience (Fisher, Aron, & Brown, 2006; Gottschall & Nordlund, 2006; Jankowiak, & Fischer, 1992; Jankowiak, Shen, Yao, Wang, & Volsche, 2015). Yet, recent empirical studies suggest that romantic love is manifested in different ways around the world and culture has been found to impact the conception of love, as well as how individuals think, feel, and behave in romantic relationships (Gareis & Wilkins, 2010; Kline, Horto, & Zhang, 2008; Wilkins & Gareis, 2012; Zeki, 2007).

**Definition of romantic love.** Defining romantic love has been a challenge for theorists. Researchers have found that people's conception of romantic love varies across cultures. The fact that romantic love is documented in cross-cultural samples stands in direct contradiction to the popular ideas that romantic love is limited to or the product of Western culture. Overall, suggesting that romantic love constitutes a universal experience. For example, studies have found that Bosnians reported higher importance of intimacy and passion than Turkish participants (Drahanović & Hasangic, 2014). Love for Brazilians has been defined through characteristics of honesty, for Russians through suffering, and for Central Americans through

tenderness (Pilishvili & Koyanongo, 2016). Several other studies have found that Asians report lower scores on eros (love that starts suddenly with a strong physical attraction of an intense and emotionally disturbing nature) and higher scores on pragma (love based on companionship, trust, and security between two people with similar values) compared to African Americans and European Americans (Dion & Dion, 1996; Henrick & Henrick, 1987; Sprecher & Toro-Morn, 2002; Wan, Luk, & Lai, 2000).

**Conflict approach.** Studies have also found cross-cultural differences in conflict approach styles between Western and East-Asian participants. For instance, collectivist participants have a strong tendency to prefer avoidant approach styles during conflict interactions, while Westerners prefer more direct approaches (Dillion et al., 2015; MacNeil & Adamsons, 2014; Ting-Toomey et al., 1991). Other studies have found that African Americans report higher levels of demand behaviors than Asian Americans, and European Americans have been found to prefer more accommodating styles (e.g., cooperative but assertive) compared to Puerto Ricans (Cionea, Johnson, Bruscella, & Van Gilder, 2015; Corey, Fok, & Payne, 2014). Similarly, when relationship conflict was perceived as high, Americans reported higher preference for active conflict management styles than Japanese participants, and when conflict was perceived as low Americans reported higher preference for agreeable conflict-management behaviors than Japanese participants (Murayama, Ryan, Shimizu, Kurebayashi, & Miura 2015). Moreover, Japanese participants have been found to value more indirect forms of communication (e.g., silence) to avoid conflict and increase commitment and closeness than American participants (Sprecher et al., 1994; Ting-Toomey et al., 1991).

In the context of romantic relationships, Flores and colleagues (2004) found that more Westernized Mexican husbands reported seeing their wives as more verbally and physically

aggressive than Mono-Mexican husbands. In this same study, during disagreements highly acculturated husbands and wives engaged in less avoidant approach strategies and more verbally expressive strategies (Flores, Tschann, Marin, & Pantoja, 2004). In interracial couples, Korean partners have been found to display higher instances of faking their emotions in the presence of their European American partner to avoid conflict (Lee & Edmonston, 2005).

**Expression of love.** Additionally, an increasing amount of research has found that people communicate love and affection in close relationships differently across cultures (Schimmitt et al., 2009; Tang, Besman, & Hatfield, 2012; Ting-Toomey, 1991; Zeki, 2007). For example, Wilkins & Gareis (2005) found that non-verbal declarations of love (e.g., making sacrifices, listening obediently) were more common in international students than domestic students. Caldwell-Harris and colleagues (2013) found that American students listed more reasons for saying, “I love you” in close relationships than Chinese students. Ting-Toomey (1991) found that French and American participants reported a higher degree of love commitment and disclosure maintenance than Japanese participants. In traditional East-Asian cultures, romantic love and intense emotional expression of romantic love are typically seen as a threat to the family structure (Allendorf, 2013; Chen & Li, 2007). In cultures like India with strong kinship networks, romantic relationships are viewed as irrelevant or even disastrous for marriages because they disrupt the tradition of family approved, often arranged, marriage choice (Allendorf, 2013; Medora, Larson, Hortacsu, & Dave, 2002).

Other studies have found that love is symbolized through the expression of actions. For example, romantic love in East-Asian cultures is displayed through mutual understanding and support of each other’s role in the family (Gao, 2001; Gao & Gudykunst, 1995). Seki and colleagues (2002) found that Americans reported greater importance of openness, verbal

expression, and physical contact in romantic relationships, while Japanese participants reported greater importance of communal understanding as a form of intimacy. Beichen & Murshed (2015) found that Westerners were more likely to use verbal expression when conveying romantic love, whereas East-Asian participants reported greater importance for gift-giving as a self-expressive role of love to partner. Similarly, Kline and colleagues (2008) found that being in-love was an important aspect for Americans, while East-Asian participants reported mutual caring as an important belief for maintenance of romantic relationships. Other studies suggest that the verbal expression of love in Filipino culture is reserved for special occasions and greater conflict has been reported by children of immigrant Asian families due to lack of verbal expression of love from parents (Karandashev, 2012; Nadal, 2012; Pyke, 2000). Lastly, researchers have found that sports and shopping were common activities for the expressing of love in Americans, while talking and preparing food were constituted as romantic symbols for the expression of love in East-Asian participants (Karandashev, 2012; Nadal, 2012).

Generally, findings suggest that romantic love is an adaptive psychological process learned from an individual's corresponding culture. Simply put, individuals learn what a romantic relationship entails and what is appropriate or inappropriate based on what cultural information is available and adopted by them. Additionally, cross-cultural studies suggest that culture can influence the expression of love and affect the way individual's think, feel, and behave in close relationships. Therefore, there is a great need to consider the cultural aspects of relationship goals and how they guide each partners experience, expression, and practice of love in their relationships, and in turn the functioning of the relationship.

### **Association Between Culturally-Based Emotional Attitudes and Relationship Goals**

Culturally-based emotional attitudes are deep seated constructs that form the foundation of how romantic relationships are acted out, particularly shaping the sorts of traits and behaviors individuals desire and expect from a partner (Levine et al., 1995; Ting-Toomey, 1991). Relationships goals are highly influenced by the sum of all the culturally transmitted emotional beliefs, ideas, and expectations of what emotional processes characterize a functioning romantic relationship (Flecher, Simpson, Thomas, & Giles, 1999; Illouz & Finkelman, 2009; Impett et al., 2010; Mercer, 2010; Teunissen & Bok, 2013). Many goals in romantic relationships are initiated by these deep seated culturally-based emotional attitudes. For instance, in Western contexts public display of affection (e.g., holding hands, hugging, backrubs/massages, caressing/stroking, etc.) between partners is often seen as good and related with positive outcomes in romantic relationships (Gulledge, Gulledge, & Stahmann, 2003). Yet, in East-Asian cultures, such as in Japan or in Middle Eastern countries, public displays of affection are less prevalent and generally do not fit the cultural custom, where shame plays a large part in motivating behavior, making it rare for partners to show love to each other in public.

Since seeking and achieving relationship goals require high amounts of motivation and energy, automatic accessibility of culturally-based emotional attitudes results in less effort to accomplish such goals, since the emotions trigger adaptive cognitive and behavioral responses and expectations in intimate relationships (Higgins, Roney, Crowe & Hynes, 1994; Tomasello, Carpenter, Call, Behne, & Moll, 2005). For example, cross-cultural studies have found that traditional East-Asian individuals place higher value on wanting to feel and engage in calmer emotional states than hostile ones (Chiu, Ganesan, Clark & Morrow, 2005; Kopf, 2015; Xu, Rodriguez, Zhang, & Liu, 2015). This pattern of culturally-based emotional attitudes is reinforced when individuals engage in fewer conflict interactions and greater calming activities

alone and with others (e.g., yoga, meditation, family and leisure activities, etc.) (Kim, Kim, & Kim, 2013; Hennink, Diamond, & Cooper, 1999; Murphy & Donovan, 1988; Sharf, 2014). This pattern is found in close relationships too, where people from collectivist cultures report greater importance of family relationships, relational harmony, face maintenance, gender roles, and family approval of partner (Dhar, 2013; Dion & Dion, 1993; Hiew et al., 2017; Leigh & Young, 2015; Skoworonski et al., 2014). Likewise, cross-cultural studies have found that individualistic people place higher value on wanting to feel and engage in high-arousal emotional states (e.g., excitement, enthusiasm). This pattern of culturally-based emotional attitudes is reinforced when individuals engage in higher levels of taking-action and verbal expression with others (Bello, Brandau-Brown, Zhang, & Ragsdale, 2010; Kuppens et al., 2016; Lim, 2016; Seki, Matsumoto, & Imahori, 2003; Tsai & Park, 2014). This pattern is also found in close relationships, where people from individualistic cultures actively engage in higher levels of self-disclosure, demonstrate love through affectionate touch, and sustain clear rules about lower involvement of extended family in romantic relationship matters (Hiew et al., 2017; Kito, 2005; Kito et al., 2017; Skoworonski et al., 2014).

In summary, these findings suggest that constant automatic evaluation of culturally desired feelings and expression of emotions (culturally-based emotional attitudes) motivates relationship goal-seeking behaviors and affects relationship experiences and outcomes (Flecher et al., 1999). Therefore, it is not surprising that we see parallel cultural differences in emotional attitudes and relationship goals across cultures. Thus, culturally-based emotional attitudes extend far beyond developing internal understanding of which emotions are viewed as beneficial and harmful, but also influence the characteristics that make up an ideal functioning close relationship. For these important reasons, the CBR<sup>2</sup> was created to allow us to observe how the functioning of close



relationships is developed in situations where partners come from different cultural backgrounds (i.e., intercultural couples).

### **Similar Emotional Attitudes, Similar Relationship Goals, Healthier Outcomes**

Previous research suggests that similar emotional attitudes predicts similar shared goals with others. For instance, Wong and colleagues (2011) found that at work shared positive emotions promoted goal attainment with superiors. In daily life, self-reported frequency of similar emotional experiences has been linked to shared goals. This point has been made by Nelissen and colleagues (2007) who found that people who experienced similar feelings of anger in daily life had similar power goals and people who experienced similar feelings of affection had similar benevolence goals (Nelissen, Dijker, & de Vries, 2007). Moreover, other studies have found that shared laughter is linked to similar work goals, including mutual understanding and accomplishment of difficult tasks, while shared feelings of enjoyment is associated with high shared approach goals and low shared avoidance goals (Jang & Liu, 2012; Kangasharju & Nikko, 2009). In short, findings suggest that similar emotional attitudes are associated with similarly shared underlying goals (Lazarus, 1991).

Consistent with this view, emerging romantic relationship literature suggests that similar versus different emotional attitudes between partners predict more favorable relationship outcomes (Schoebi & Randall, 2015). For example, studies have found that similar emotional attitudes provide meaning to romantic experiences and are a vital component to daily intimacy (Fredrickson, 1998; Gable, Gonzaga, & Strachman, 2006). Partners who share similar emotional attitudes are able to soothe and comfort each other in times of need and report greater stability (Gottman & Levenson, 2000; Hershenberg, Mavandadi, Baddeley, & Libet, 2016). Malouff and colleagues (2014) found that when romantic partners shared similar emotional attitudes,

including perception, understanding, managing, and harnessing emotions, higher relationship satisfaction was reported than those who did not, and similar emotional reactions between social partners have been found to buffer perceived stress (Townsend, Kim, & Mesquita, 2014). In addition, Algoe and colleagues (2010) discovered that shared gratitude from husband and wives predicted increases in relationship connection and satisfaction the following day for both partners. Other studies have found that partners with similar styles of humor report greater relationship fulfillment (Hall, 2013; Thompson & Bolger, 1999). Dyadic emotional interaction studies have found that the length of consistency of positive emotional experiences between partners is associated with staying together (Ferrer, Steele, & Hsieh, 2012).

Mainly, findings suggest that similar emotional attitudes between partners facilitate similar interpersonal behavioral patterns in both partners. For example, partners who share similar emotional attitudes are likely to perceive greater sense of connection, cooperation, and greater support than those who do not because shared emotional attitudes cause partners to behave in ways that match each others' relationship expectations and beliefs, and thus leads to greater commitment and satisfaction (Bauimester et al., 2007; Rusbult & Van Lange, 2003). Moreover, the promotion of similar emotional attitudes between partners serves as a direct facilitator for partners to work together to develop and meet mutually beneficial relationship goals (Wieselquist, Rusbult, Agnew, & Foster, 1999).

Similar relationship goals between partners helps to keep the relationship thriving even when drawbacks occur. On the other hand, different emotional attitudes between partners undermine the development of shared goals (Wieselquist et al., 1999). Researchers have suggested that when emotional attitudes are highly incongruent, partners find it difficult to successfully integrate individual goals, and the pursuit of different non-shared goals increases disconnection

and conflict (Emmons & Kings, 1988; Kelly, Mansel, & Wood, 2010; Wieselquist et al., 1999).

Non-shared goals between partners can evoke contrasting emotions, and in turn threaten individual goals, increase feelings of rejection from partner, and lower understanding and trust (Chartrand, Dalton, & Fitzsimons, 2006; Emmons & Kings, 1988; Kappes & Schrouf, 2010).

Thus, stronger relationships would be expected from shared emotional attitudes and relationship goals between partners because their presence is related to more responsive and effective ways of accommodating to a partner's emotional needs, and as a result a higher disposition to better relationship quality.

### **Interpersonal Emotional Processes and Relationship Quality**

Several empirical findings have found a link between effective interpersonal emotional processes and relationship quality (Ben-Naim, Hirschberger, Ein-Dor, & Mikulincer, 2013; Bloch, Haase, & Levenson 2014; Gable, Reis, Impett, & Asher, 2004; Gottman, 1994; Gottman & Levenson, 1992; Levenson, Carstensen, & Gottman, 1994; Vater & Schroder-Abe, 2015; Zaki & Williams, 2013). Most studies suggest that couples who promote and reciprocate effective interpersonal emotional exchanges in various settings also report greater intimacy, trust, satisfaction, love, and commitment in the long-run (Cundiff et al., 2015; Goodfriend & Agnew, 2008; Gottman, 1994; Gottman & Levenson, 1992; Le & Impett, 2013; Levenson et al., 1994; Meyer, Jones, Rorer, & Maxwell, 2015; Rosand, Slinning, Roysamb, & Tambs, 2014; Stanley & Markman, 1992). Below I describe four interpersonal emotional processes that are important to romantic relationships and provide insight into the shared features of a healthy functioning relationship. These processes include responsiveness to emotional disclosure from a partner, effective interpersonal emotion regulation strategies, emotional synchrony, and physiological arousal. Defining *effective or ineffective* interpersonal emotional processes entails a lot of

potential complexity (e.g., effective for both partners or only one, effective in the short term versus long term, effective for self-regulation or relationship quality, etc.), so this study focused simply on the degree to which each individual felt that they and their partner successfully regulated and responded to each others emotions.

**Responsiveness to emotional disclosure.** Researchers argue that successful healthy relationships transpire when partners are able to effectively respond to each other's emotional needs (Bloch, Haase, & Levenson 2014; Gottman, 1994; Gottman & Levenson, 1992; Levenson, Carstensen, & Gottman, 1994; Rusbult, Martz, & Agnew, 1998; Vater & Schroder-Abe, 2015). For example, greater relationship satisfaction and stability have been reported when partners constructively respond to each other during positive and negative disclosure events (Donato, Pagani, Parise, Bertoni, & Iafrate, 2014; Flecher, 2002; Henrick & Henrick, 1987). Other studies have found that partner's perceptions of ineffective responses are linked to long-term hurt feelings, dissatisfaction, and in some cases, are easily re-triggered by similar hurtful events years later (Leary, Springer, Negel, Ansell, & Evans 1998).

Studies have also found that effective interpersonal emotional responses are diagnostic of a healthy relationship because partners are easily able to achieve daily emotional coordination and rapid resolution during stressful or conflictual exchanges (Gable et al., 2004; Lopes et al., 2011). For instance, partners who are able to detect and effectively respond to each other's emotional needs are more likely to report greater relationship quality because mutual coordination allows couples to quickly correct and provide appropriate interpersonal responses, all the while reducing the frequency of negative arousal and increasing the frequency of positive emotional exchanges (Batoool & Khalid, 2009; Brackett, Warner, & Bosco, 2005; Finkenauer, Meij, Reis, & Rusbult, 2010). Yet, the way people seek and provide support differs by culture, and these differences are

consistent with cross-cultural studies reviewed above about the expression of love and approach to conflict in couples (Dillion et al., 2015; MacNeil & Adamsons, 2014; Pyke, 2000; Ting-Toomey et al., 1991; Wilkins & Gareis, 2005). Therefore, the CBR<sup>2</sup> model focuses on perceptions of effective interpersonal responses at the individual level as a way of considering how culture influences psychological tendencies and processes in interpersonal exchanges involving both positive and negative emotional disclosure events.

**Interpersonal emotion regulation strategies.** Recent studies have focused their attention on understanding what types of interpersonal emotion regulation strategies are used by couples who report more successful emotional exchanges and greater relationship quality. More specifically, studies have found that interpersonal worry-alerting and suppression are less constructive strategies for promoting healthy functioning relationships. Particularly, studies have found that male partner's worry positively predicted female partner's interpersonal calming attempts and negatively predicted female partner's interpersonal alerting attempts (Parkinson, Simons, & Nivens, 2016). In addition, other studies have found that high worriers display greater cardiac defense responses than low worriers, and having an overly anxious partner is related to excessive emotional dependency, greater expenditure of emotional energy, greater frequency of conflict, and lower relationship resolution (Campbell, Simpson, Boldry, & Kashy, 2005; Delgado et al., 2009; Doron, Szepeswol, Karp, & Gal, 2013; Parkinson et al., 2016). Studies have also found that suppressing or withholding emotions from a partner is associated with negative mood, lower psychological well-being and greater dissatisfaction (Debrot, Schoebi, Perrez, & Horn, 2014, Impett et al., 2012; Velotti, et al., 2016). Within the demand-withdraw literature, when one partner demands change and the other one withdraws from the situation (i.e., a form of suppression), over time it has been linked to lower commitment, greater stress during conflict,

and greater probability of separation and divorce (Caughlin & Vangelisti, 2000; Gunicks-Stoessel & Powers, 2009; Heavey, Christensen, & Malamuth, 1995; Jarnecke, Reilly, & South, 2015; Roberts, 2003).

Yet, cross-cultural studies reveal that the use of certain emotion regulation strategies are associated with more favorable outcomes in some cultures than others. For example, suppression has been linked to lower depression and anxiety, and greater positive affect and life satisfaction in East Asian participants but not North Americans (Hu et al., 2014). Relatedly, greater use of suppression by Americans has been associated with higher distress and lower well-being in comparison to members of East-Asian cultures (Soto et al., 2011). Other studies have found similar results with African American couples who display higher levels of interrupting the partner, use of negative tone of voice, and withdrawal behaviors than European American couples, but these behaviors are found to be less damaging in African American couples (Orbuch et al., 1993; Orbuch, 2002). In sum, findings suggest that perception of partner effectiveness and use of interpersonal emotion regulation strategies are important to relationship quality, but there may be different ways of performing and defining the emotional components of high quality relationship functioning across cultures.

**Emotional synchrony.** Previous work has found that emotional synchrony (i.e., people's emotions rising and falling at the same time) can arise in both good and bad exchanges between partners (Lindsey, Colwell, Frabutt, Chambers, & MacKinnon-Lewis, 2008). For example, studies have found that the experience of intense collective emotions between partners can occur due to shared empathy, laughter, appraisal, enthusiastic responses, but also during conflict (Moscovitch, Suvak, & Hofman, 2010; Rennung & Goritz, 2015; Paez, Rime, Basabe, Włodarczyk, & Zumeta, 2015). More specifically, some studies have found that emotional

synchrony between partners is linked to higher stimulation of positive affect, relationship well-being, and social cohesion (Gottman, 1994; Paez et al., 2015; Zumeta, Basabe, Włodarczyk, Bobowik, & Páez, 2016), but other studies have found connections between synchrony and higher conflict (Levenson & Gottman, 1983; Levenson & Gottman, 1985; Powers, Pietromonaco, Gunlicks, & Sayer, 2006; Saxbe & Repetti, 2010).

However, similar to emotion regulation, studies have found that associations between relationship processes and emotional synchrony is dependent on culture. For instance, synchrony of negative emotions has been linked with greater marital satisfaction across American and Asian-Indian couples, but synchrony of positive emotions was associated with decreased satisfaction only for Asian-Indian love couples' (Randall, Corkery, Duggi, Kamble & Butler, 2012). In this same study, synchrony of both positive and negative emotions was related to higher closeness for Asian-Indian love couples but reduced closeness for American couples (Randall et al., 2012). Overall, the results suggest that the degree of emotional synchrony may be dependent on shared or unshared cultural emotional attitudes and relationship goals between partners that may reflect healthy outcomes for the former and harmful outcomes for the latter.

**Physiological arousal.** Physiological arousal has been found to occur during both frustrating and happy moments between partners (Gottman, 1994; Gottman & Levenson, 1992; Menchaca & Dehle, 2005). Generally, studies have found that romantic couples who display higher heart rate, and greater blood flow and sweat from their palms, during conflict are more likely to report experiencing reoccurring conflict, poor health, dissatisfaction, and separation and divorce (Diamond, Hicks, & Otter-Henderson, 2011; Levenson & Gottman, 1983; Perrone-McGovern et al., 2013; Robles & Kiecolt-Glaser, 2003; Story & Bradbury, 2004; Whitson & El-Sheikh, 2001). But other studies have found that experiencing and displaying greater physiological arousal

during shared novel and exciting tasks is linked to greater relationship satisfaction (Aron, Norman, Aron, McKenna, & Heyman, 2000; White, Fishbein, & Rutsein, 1981). Thus, both negative and positive life events may produce high physiological arousal (Pietromonaco & Barrett, 1997).

Like emotional synchrony, findings suggest that physiological arousal is dependent on culture. Among the handful of studies that exist on cultural differences in physiology, in laboratory manipulations Asians showed a significant decrease in physiological arousal when required to suppress their emotions compared to European Americans (Murata, Moser, & Kitayama, 2013). Ma-Kellams and colleagues (2012) found that Asian participants were less sensitive to physiological cues relative to European Americans from a misattribution of arousal test measured by heart rate activity. In the context of romantic couples, differences in physiological responses have been found during conflict interactions between Chinese American couples compared to European American couples. For instance, Chinese American couples were found to display lower heart rate, lesser skin conductance variability, and fewer periods of positive affect than European American couples (Tsai & Levenson, 1997). Overall, these studies suggest the importance of culture to the study of physiological arousal and relationship functioning. If partners differ in their cultural emotional attitudes and relationship goals this may lead to harmful outcomes during times of conflict and poor relationship quality, especially if such patterns are repeated and chronic, and in turn, compromise couples' ability to return to physiological homeostasis or find joy during positive shared events (Pietromonaco & Barrett, 1997; Timmons, Margolin, & Saxbe, 2015; Yuan, McCarthy, Holley, & Levenson, 2010).

In summary, previous studies point to several key points. First, the perception of effective or ineffective interpersonal responses and emotion regulation are dependent on what is considered



culturally appropriate and inappropriate, which may influence emotional synchrony between partners and physiological arousal (Randall, Corkery, Duggi, Kamble, & Butler, 2012; Timmons, Margolin, & Saxbe, 2015; Tsai & Levenson, 2003; Tsai, Levenson, & McCoy, 2006; Yuan et al., 2015). Second, the interpersonal emotional events that are accompanied by negative arousal between partners generate a force that influences the quality of the relationship (Adams, 1994; Asano, Ito, & Yoshida, 2016; Emmons & Kings, 1988). Studies largely indicate that happy satisfied couples tend to report more effective interpersonal emotional responses, display lower physiological arousal and faster recovery during conflict discussions, while greater probability of separation and divorce is found in those who report less effective interpersonal emotional responses and are unable get out of negative emotional states during conflict interactions (Cartensen et al., 1995; Chen, 1995; Flecher, 2002; Gottman & Levenson, 1992; Gottman & Levenson, 1999; Levenson & Gottman, 1983; Rusbult & Van Lange, 2008). These findings highlight that each person's emotional needs, cognitions, and motives in relation to one another are largely contingent on the psychological elements of culture. Thus, a major contribution of the CBR<sup>2</sup> model is to advance our understanding of what makes a healthy functioning long-term relationship, we must begin to analyze the sorts of psychological elements, such as beliefs and values, that drive expectations and behaviors during interpersonal interactions that are rooted in culture.

### **The Culturally-Based Romantic Relationship (CBR<sup>2</sup>) Model**

To understand why partners from different cultural backgrounds are more vulnerable to separation and divorce versus same-race couples, previous studies have focused on normative metrics such as race and ethnicity. Relatedly, other studies suggest that energetic responses are most effective in Western couples, while more passive or emotionally removed responses may be

more effective in other cultures. However, in the specific culture of a given relationship, partners may be highly satisfied even though from an outside perspective their interactions may appear to be characterized by distance, low affect, argumentative behaviors, high arousal, or un-involvement. These interpretations would lead us to conclude that certain couples are more dissatisfied than others, when in fact they are not. This conception can be harmful in many ways when measuring relationship interactions, when interpreting findings, and in therapy evaluations and applications. Therefore, it is imperative to consider the psychological elements of culture that signal what is preferred and expected in intimate relationships.

To develop a more holistic understanding of how loving healthy relationships function, the CBR<sup>2</sup> proposes that partner-shared culturally-based emotional attitudes and relationship goals may predict effective interpersonal emotional processes, and in turn better relationship quality (Hadden & Knee, 2015; Laurin et al., 2016; Worley & Samp, 2016). Particularly, when partners want the same thing, greater relationship quality may be found because partners can emotionally respond in effective ways across contexts (i.e., sharing emotions, resolving conflict and misunderstandings, etc.), behave in ways that match each other's expectations and beliefs, elicit more positive relationship behaviors, and fulfill shared relationship standards (Acitelli et al., 2001; Campbell, et al., 2001; Flecher, 2002; Flecher et al., 2000; Nakonezky & Denton, 2008; Schoebi & Randall, 2015; Weigel, 2008; Weigel & Ballard-Reisch, 2014). In contrast, differences between partners in emotional attitudes and relationship goals may generate interpersonal tension and emotional disconnection because each partner holds different expectations about how partners should behave and how relationships should be acted out, which in turn may lead to poor relationship quality.

Therefore, the CBR<sup>2</sup> proposes that every successful relationship is successful for the same

reason. Couples need complimentary emotional attitudes and relationship goals for more effective interpersonal exchanges to enhance commitment, intimacy, trust, and stability (Gottman, 1994; Laurenceau, Barrett, & Pietromonaco, 1998; Lemay & Clark, 2008; Rafaeli & Gleason, 2009). This model predicts that when it comes to building a healthy and strong romantic relationship, shared emotional attitudes and relationship goals between partners, which may be critical determinants to the quality of the relationship. Powerful connections flourish when these foundational building blocks are established, which are crucial to the long-term success of intercultural relationships, and highly applicable to the long-term success of same-race relationships as well.

### **Overview of the Study**

Given that the literature suggests that heterosexual intercultural couples are at less risk of surviving compared to same-race couples to be able to generalize the results to this population the present study empirically tested the CBR<sup>2</sup> model solely on heterosexual romantic couples who self-reported being involved in an intercultural relationship. Participants were asked to complete an online baseline questionnaire. Following this, couples attended a lab session where they went through a series of four video recorded emotional conversations while physiological responses were recorded. After each emotional conversation, couples completed a short questionnaire. At the end, partners watched the video-recorded interactions on their own and rated how they remembered feeling (second-by-second) during the four conversations using a rating dial.

**Hypotheses.** The CBR<sup>2</sup> model predicts that similarities in culturally-based emotional attitudes and relationships goals between partners are an important element in determining the quality of healthy relationship functioning. Correlations between partner's emotional attitudes

and relationship goals (e.g., within-couple correlations) were used to test associations between romantic partners' similarities, interpersonal emotional processes and relationship quality. At high levels of similarity in emotional attitudes and relationship goals between partners (correlations closer to 1), I expected to find more effective interpersonal emotional processes during the lab session and thereby, greater relationship quality. At low levels of similarity in emotional attitudes and relationship goals between partners (correlations closer to -1), I expected to find less effective interpersonal emotional processes during the lab session and thereby, lower relationship quality.

To my knowledge this represents the first attempt to explore how similarities and differences between romantic partners in culturally-based emotional attitudes and relationship goals predict effective or ineffective interpersonal emotional processes, and in turn relationship quality. As previously mentioned, because emotional attitudes and relationship goals are dependent on culturally normative ways of thinking, feeling, and behaving, a deeper understanding of how the psychological elements of culture impact and operate in close relationships is in high demand. The aim of this model is to provide a theoretical basis for examining the common processes that are important to intimate relationships, but also to consider the profound value of subjective culture that deeply shapes how we seek to form those relationships.

## CHAPTER III: METHODS

### Participants

This study collected data from committed heterosexual romantic couples over the age of 18, who were either married or unmarried, and with or without children in their relationship. To participate in the study, couples had to meet the following criteria: (1) both partner's self-reported being in an intercultural romantic relationship, (2) were committed to each other for at least a year, and (3) both partners agreed to participate in the baseline survey and laboratory session. Given that previous studies have found that the longer couples are together the more similar they become to one another after 10 years or longer, couples were excluded if they had been committed for more than 10-years (Anderson, Keltner, & John, 2003; Humbad, Donnellan, Iacono, & Burt, 2010; Zajonc, Adelman, Murphy, and Niedenthal, 1987). In addition, previous sample sizes in qualitative studies of mixed-race relationships have been small, ranging from 10-15 couples, while quantitative studies have ranged from medium to large samples due to the use of national datasets (Charmaraman, Woo, Quach, & Erkut, 2014; Okamo, 2007; Qian & Litcher, 2008; Wo, Schimele, & Hou, 2015). Given the practical constraints of collecting romantic couple data for a graduate student (e.g., time, funding, etc.), the present study aimed to recruit a minimum of 30 couples. In addition, recruiting this minimal number of couples was supported by a statistical power analysis for cross-sectional dyadic models using R software that suggests that this sample size would be large enough to adequately power dyadic regression models for detecting moderately large effect sizes of at least .40. The final sample for this study included 40 couples (N =80).

### Procedures

*Prescreening recruitment and eligibility.* Couples were recruited via university list

serves, campus flyers, local businesses, as well as through snowball sampling and word of mouth. Individuals who were interested in participating were asked to complete a prescreening online questionnaire through Qualtrics. During this process, no identifying information was recorded, but the screening forms were kept for the duration of the recruiting period to track rates of enrollment and reason for ineligibility. Individuals who were eligible were asked to discuss the study with their partner to ensure that they were also willing to participate. Once both partners had agreed to participate a follow-up email or phone call was made by me the primary investigator (PI). Participants were then provided with a random ID number that identified them for the rest of the study.

*Baseline.* Once eligibility had been established from the online prescreening questionnaire, couples were contacted to inform them about the study. Here, participants were informed about their rights to participate (e.g., voluntary, confidential, etc.), compensation information, and asked to complete an online baseline questionnaire and arrange a time/date for a couple lab session. The baseline questionnaire was centered on romantic relationships, cultural matters, and relationship quality and took approximately 20-40 minutes to complete.

*Couple lab session.* This part of the study was conducted in the Lang Lab in the McClelland Park Building at the University of Arizona from Spring to mid-Summer 2018. When participants arrived at the lab they were provided with a consent form to read, which covered all study procedures. When they had finished reading I went through it with them ensuring comprehension and answering any questions. Once participants have given their consent, the session began with them answering a set of online self-report questions about factors that could impact their physiological state (e.g. recent caffeine intake) and their current mood. This questionnaire was completed on a lab computer to access a secure password protected website.

Next, physiological sensors were applied to participants to measure electrodermal activity and heart rate. Then, to measure participants' normal resting physiological states, participants were asked to sit quietly while watching a neutral nature film clip for 3 minutes. Following this, participants filled-out another questionnaire to determine their current mood and topics for the following four video-recorded emotional conversations. Three unobtrusive digital cameras were used to record the conversations and the files were stored on a local, secure, password protected computer. For each conversation, couples were given instructions regarding the topic, and then encouraged to respond and behave as they normally would outside of the lab. Couples were given 5 minutes to discuss each topic. If they finished sooner they were asked to indicate that they were done to move to the next topic. Couples were asked to respond to questions as they found fitting. The following four emotional conversations proceeded in the same order for every couple. In conversation 1, romantic partners took turns discussing a recent positive event that they experienced on their own and had not shared with each other. In conversation 2, romantic partners took turns discussing a recent undesirable event that they experienced on their own and had not shared with each other. In conversation 3, each partner took turns discussing a current relationship concern that was causing him or her distress. In conversation 4, the final conversation, the partners took turns discussing their first date and each partner shared three things that attracted them to each other at the start of their relationship (Shiota et al., 2010).

After each conversation, both partners completed a short questionnaire where they rated their own emotions, perceptions of responsiveness from their partner, and their own use of three interpersonal emotion regulation strategies, along with perceptions of their partner's effectiveness in using these same strategies. Lastly following this, partners watched their video-recorded interactions on their own and rated how they remembered feeling (second-by-second)

during the four conversations using a rating dial that moved from negative at 0 degrees to positive at 180 degrees, with neutral at 90 degrees. A standing screen was placed between partners so they had access to the video-recording but not each other. Each participant was compensated with \$5.00 for completing the baseline survey and \$15 for completing the couple's lab meeting, but not including prescreening, with a \$10 bonus for completing all parts of the study. The maximum compensation for each person was \$30. Compensation was provided at the end of lab portion of the study.

## **Measures**

### **Prescreening questionnaire.**

At first contact with the study, couples were asked to complete a prescreening online questionnaire that included the following demographic and eligibility information: 1) age, 2) education, 3) racial identification, 4) ethnic identification, 5) romantic relationship status, 6) relationship length, 7) sexual orientation of the relationship, and 8) a single item that assessed involvement in an intercultural relationship, worded as follows: "An intercultural romantic relationship is defined as both partners coming from different racial, ethnic, language and/or religious backgrounds (Ho, 1990). Based on this definition do you consider yourself to be involved in an intercultural romantic relationship?" 0 = no and 1= yes.

### **Baseline questionnaire.**

*Ideal affect.* The Affect Valuation Inventory assesses how often participants would ideally like to feel a series of 30 emotions (e.g., enthusiastic, excited, happy) over the course of a typical week. Responses range from 1 (*never*) to 6 (*all the time*). The following is an example item, "How much would you ideally like to feel excited?" (Tsai, Knutson & Fung, 2006). Higher scores indicated greater idealization of that emotion. Cronbach's alpha of all items was .72.



*Display rules.* The Display Rule Inventory assesses specific behavioral choices participants believe they should make if they felt each of seven emotions (anger, contempt, disgust, fear, happy, sad, surprise) towards 21 targets. Instead of the original 21 targets (e.g., a close friend, family, etc.) romantic partner was substituted for this study in the contexts of private (at home by yourselves) and public (at a restaurant in plain view and within earshot of others). This measure includes a total of 14-items with responses ranging from 1 (*hide your feelings by showing something else*) to 6 (*show more than you feel*). Participants were asked to read and rate items such as the following examples, “What do you believe you should do if you are with your romantic partner, at home by yourselves and you feel anger towards him/her?” and “What do you believe you should do if you are with your romantic partner, in public and you feel anger towards him/her?” (Matsumoto et al., 2008). Higher scores indicated greater emotion expression. Cronbach’s alpha of all items was .78.

*Definition of love.* The Love Attitudes Scale assesses six different types of romantic love including: eros (passionate love), ludus (game-playing love), storge (companionate love), pragma (practical love), mania (possessive, dependent love), and agape (all giving, selfless love). Cronbach’s alpha for each subscale was .60, .60, .80, .82, .63, and .68. These six subscales include a total of 24-items with responses ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Participants were asked to rate their agreement to items such as the following examples, “My partner and I have the right physical ‘chemistry’ between us” and “Our love is the best kind because it grew out of a friendship” (Hendrick, Hendrick, & Dicke, 1998). Higher scores for each subscale indicated greater agreement with that definition of love. Cronbach’s alpha of all items was .80.

*Conflict approach.* The Conflict Communication Scale assesses individual differences in approach to general conflict (direct and avoidant). These two subscales include a total of 15-items with responses ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Participants were asked to rate items such as the following examples, “I wait to see if a dispute will resolve itself before taking action” or “Conflicts make relationships interesting” (Golstein, 1999). Higher scores from each subscale indicated greater agreement of engaging in a specific conflict approach style. Cronbach’s alpha for each subscale was .69 and .85. and for all items was .87.

*Expression of love.* The Love Languages Inventory assesses five approaches to expression of love including: acts of service, physical touch, words of affirmation, quality time, and gifts. Cronbach’s alpha for each subscale was .78, .84, .91, .67, and .71. These five subscales include a total of 20-items ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were asked to rate their agreement to items such as the following examples, “I tend to express my feelings to my partner by running errands for him/her” or “I tend to express my feelings to my partner by giving my partner a kiss” (Egberg & Polk, 2006). Higher scores from each subscale indicated greater agreement with specific expressions of love. Cronbach’s alpha of all items was .89.

*Relationship Quality.* The Perceived Relationship Quality Components Inventory assesses satisfaction, commitment, intimacy, trust, and love. These five-subcales include a total of 18-items ranging from 1 (*not at all*) to 5 (*extremely*). Participants rated their agreement to items such as the following examples, “How satisfied are you with your relationship?” and “How much can you count on your partner?” (Flecher, Simpson, & Thomas, 2000). Higher scores indicate higher relationship quality. Cronbach’s alpha for each subscale was .91, .90, .68, .83, and .75. and for all items was .91.

### **Couple lab session.**

*Physiological measures.* Physiological data is valuable to supplement customary measures of relationship quality and satisfaction (Gottman, 1994; Levenson et al., 1994; Tsai & Levenson, 2003). For example, physiological data offers a means of circumventing self-presentation bias in observational couple interactions. Physiological data in this study was used to capture a more holistic understanding of the quality of relationship functioning, in addition to self-report measures, by exploring unconscious patterns of physiological reactivity and synchrony between romantic partners. Accordingly, all participants were connected to two physiological sensors to derive two measures: 1) electrocardiogram (EKG or ECG) and 2) electrodermal activity (EDA). The EKG signal was used to measure electrical activity of the heart over time (i.e., heart rate). For this signal, two sensors were placed on the participants ribs and one sensor on their collar-bone. The EDA signal was used to measure automatic changes in the electrical properties of the skin (sweat levels) and was quantified by applying an electrical potential between two points of skin contact and measuring the resulting current flow between them. For this signal, a small voltage sensor was applied to the middle phalanges of the first and third finger of the participant's non-dominant hand. All physiological signals were averaged in 10-second units over the baseline and across all emotional conversation topics to establish physiological arousal via heart rate and EDA for each participant.

*Self-report measures. Responsiveness to positive and negative emotional disclosure from partner.* The Perceived Responses to Capitalization Attempt Inventory assessed perceptions of a partner's typical responsiveness to the sharing of positive emotions. This measure included a total of 12-items ranging from 1 (*not at all*) to 7 (*very true*). After couples' completed conversation 1 (sharing of a positive event), each partner was asked to complete items such as

the following example, “When I told my partner about something good that happened to me, my partner reacted to my good fortune enthusiastically” (Gable et al., 2004). Higher scores indicated more responsiveness and lower scores indicated less responsiveness. Similar items were created for responses to the sharing of negative emotions for the purposes of this study by replacing small phrases such as good to bad or happy to sad. After couples completed conversation 2 (sharing of a negative event), each partner was asked to complete items such as the following example, “When I told my partner about something bad that has happened to me, my partner said little, but I know he/she is sad for me.” Cronbach’s alpha for each conversation topic (1-4) were .72, .65, .75, and .67.

*Own emotion regulation strategies.* Each partner was assessed for their own use of three interpersonal emotion regulation strategies after each of the four conversations. For the first two, the Interaction Rating Scale assesses use of *interpersonal alerting* and *interpersonal calming*. This measure includes the following two-items ranging from 1 (*not at all*) to 7 (*very much*) (Parkinson, Simon, & Niven, 2016; Simons, Pasqualini, Reddy, & Wood, 2004), “To what extent were you trying to get your partner to feel calmer about this issue (*interpersonal calming*)?” and “To what extent were you trying to get your partner to appreciate how worrying this issue was (*interpersonal alerting*)?” Lastly, no studies have measured the use of *interpersonal composure* during a couple interaction. This was assessed with one new single-item ranging from 1 (*not at all*) to 7 (*very much*). Use of interpersonal composure was rated by the following item, “To what extent did you try to appear to be relaxed when interacting with your partner?” Higher scores indicated greater agreement with this interpersonal strategy. Cronbach’s alpha across all items for each conversation topic (1-4) were .68, .65, .61, and .61.

*Partner effectiveness.* Each participant was assessed for their perception of their partner’s

effectiveness in using the same interpersonal emotion regulation strategies after each of the four conversations. This was assessed with three new single-items ranging from 1 (*not at all effective*) to 7 (*very much effective*). Participants were asked to rate the following items: “My partner was effective in calming me down (*interpersonal calming*), my partner was effective in making me worry about the issue (*interpersonal alerting*), and my partner was very helpful because he/she remained relaxed during our interaction (*interpersonal composure*).” Higher scores indicated greater agreement with partner effectiveness of using each strategy. Cronbach’s alpha for all items for each conversation topic (1-4) were .68, .65, .75, and .74.

*Emotional synchrony.* After completing the short questionnaire following the last conversation topic, each partner continuously rated the valence of their emotional experience using a rotary 180-degree rating dial knob. This pointer ranged from a signal of 0 (*feeling extremely negative*), 3 (*feeling neutral*), to 5 (*feeling extremely positive*). This method was used to assess emotional experience in second-by-second increments. The rating dial position was sampled by the computer 100 times per second and averaged every 10-seconds. Prior to the start of using the rating dial, couples were instructed by a research assistant on the use of rating dial and adjustment of the dial. Individuals were encouraged to adjust the dial as often and as necessary to accurately reflect how they felt during their interaction. Emotional synchrony was calculated by computing a correlation over time between Partner A and Partner B’s averaged 10-second unit ratings across all emotional conversations. This correlation was normally distributed with a mean of .67, standard deviation of .12, and range of .37 to .92.

### **Data Analysis**

The relatively small sample size of the current study required the CBR<sup>2</sup> to be examined in a sequence of smaller logical models, where culturally-based emotional attitudes and relationship

goals are the main model predictors and interpersonal emotional processes and relationship quality are the main model outcomes.

*Multilevel modeling.* I used multilevel modeling with R software to account for the interdependent nature of the data obtained from dyad members (Kenny, Kashy, & Cook, 2006; Raudenbush & Bryk, 2002). Traditional analysis of variance (ANOVA) and analysis of covariance (ANCOVA) require the underlying assumption of independent data, which is inappropriate for dyadic data. Luckily, very little missing data (less than .5%) was found across variables of interest. Missing data was not associated with age, relationship quality, or any of the assessed demographic variables and variables of interest. Thus, missing data was treated as random and pairwise deletion was used to handle the small amount that existed. Prior to any model analysis I examined the distribution of variables, skeweness and kurtosis, and outliers through several preliminary methods including x-y plots, boxplots, histograms, simple correlation models, and descriptive statistics (e.g., mean, standard deviation, etc.) within-and-between predictors and outcomes.

The analyses included 3 steps: 1) Preliminary analyses examining the distribution of variables and scale reliability of all items of interest, 2) the main analyses for testing the model, and 3) exploratory analyses used to examine relational patterns between main model predictors and outcomes. All statistical models were built-up gradually, using model comparison techniques to determine the best fitting model. When models are nested within one another and use identical data, model comparisons can be executed through use of the deviance statistic in multilevel modeling programs. The deviance statistic is included in the output in R software (e.g., log likelihood tests). The deviance statistic quantifies the fit of one model compared to the saturated

model (i.e. a model that fits perfectly) and with two or more models the deviance statistic quantifies the fit by comparing the models to each other.

The following residual structures were used for the final model for each step in the analysis: *Preliminary models* - the best fitting models preferred a heterogeneous compound symmetric covariance matrix for the residuals that had one covariance shared across romantic partners and a separate residual variance for men and women. *Main and exploratory models*– the best fitting models preferred no compound symmetric covariance matrix for the residuals, compared to models with an added separate residual variance for men and women across all final models. However, similar to the preliminary models, those with physiological arousal (heart rate and EDA) as the main outcome variable preferred a heterogeneous compound symmetric covariance matrix.

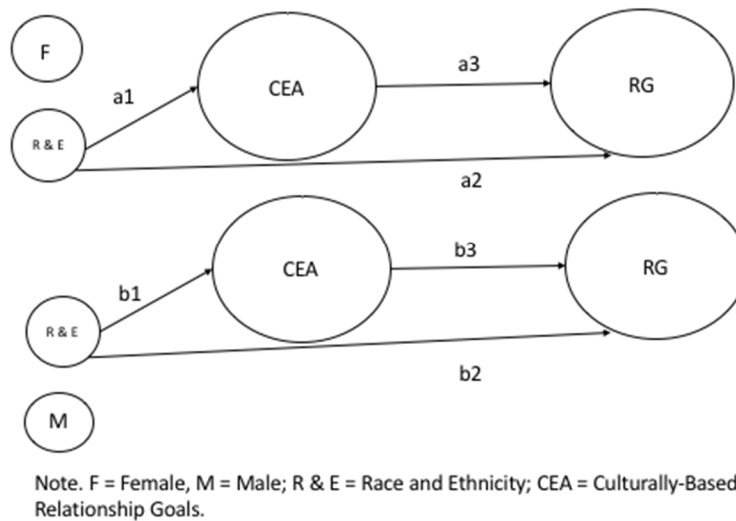
*Computing couple similarity.* Partners' similarity was operationalized in terms of profile correlations of partner's culturally-based emotional attitudes and relationship goals. Profile correlations are descriptive indices that range from -1.00 (opposite or different) to 1.00 (shared or similar) in terms of partner's ratings for each domain (culturally-based emotional attitudes and relationship goals). More specifically, profile correlations were computed between men and women's self-ratings on all items separately for each of the two domains. Each partner was treated as if he or she were a separate variable, and each item was treated as an individual who provided answers to both variables. A correlation was then calculated between those two variables (e.g., both partners reports for each item), and the number of items comprising that correlation represents the number of observations or the sample size. The result of this analysis provided two profile correlations for each couple. One correlation represents the similarity of culturally-based emotional attitudes for each couple (named *Sim\_Emotions*: see Figure 1). The

other correlation represents the similarity of relationship goals for each couple (named *Sim\_Relationship*; see Figure 1). These two correlations were then used as predictors in subsequent dyadic regression models.

*Preliminary analysis.* Prior to hypothesis testing, I checked scale-reliability to generate composite scores for all main model predictors and outcomes. I found adequate reliability of .60 or higher for all composite scores. Next, as a preliminary step, the first model focused on understanding how *Sim\_Emotions* and *Sim\_Relationship* were connected at the individual level (see Figure 2, paths a3 and b3) and whether they were influenced by individual's own racial and ethnic identification (Figure 2, paths a1, a2, b1, b2). Although partners are known to influence each other's emotions, behaviors, etc., findings support that individuals come into relationships with predisposed ideas/expectations that originate from their own background, which influences how they interact with each other (Flecher et al., 1999; Mercer, 2010). Thus, this step focused on the unique influence of the actor effects and not partner effects. More specifically, several dyadic models were used to determine if a person's own *Sim\_Emotions* predicted their *Sim\_Relationship* (paths a3 and b3). In addition, separate dyadic models were used to determine if race and ethnicity predicted *Sim\_Emotions* (paths a1 and b1) and *Sim\_Relationship* (paths a2 and b2), along with sex as a potential moderator for all models.

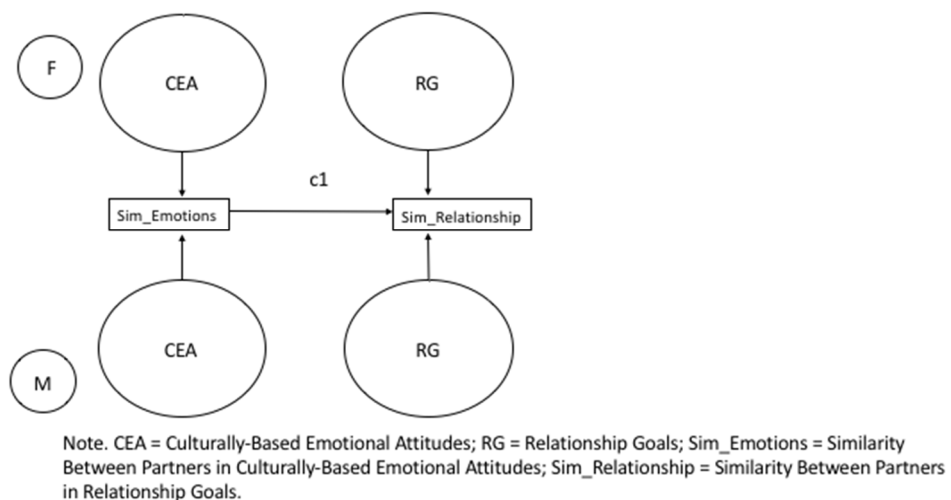


Figure 2. Preliminary Analysis



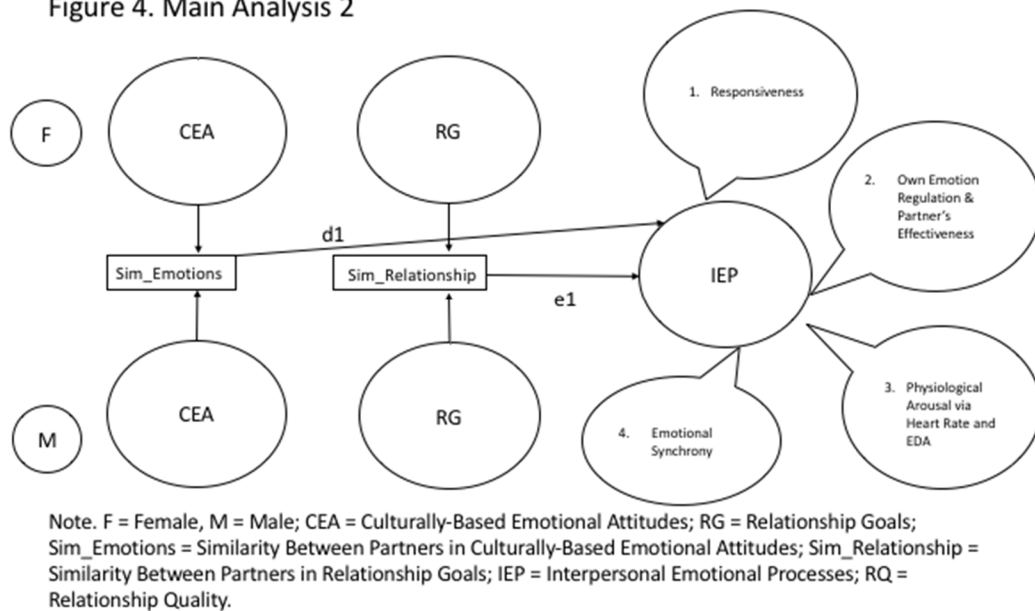
*Main model analysis.* The following analyses were selected to best represent and effectively test the CBR<sup>2</sup> by focusing on paths with the strongest theoretical basis as suggested by empirical evidence described above (Emmons & King, 1988; Lazarus, 1991; Illouz & Finkelmann, 2009; Rusbult & Van Lange, 2003). As a first step, studies indicate that similar emotional attitudes result in similarly shared goals, therefore, the first main model examined whether Sim\_Emotions predicted Sim\_Relationship, (see Figure 3) (Emmons & King, 1988; Rusbult & Van Lange, 2003).

Figure 3. Main Analysis 1



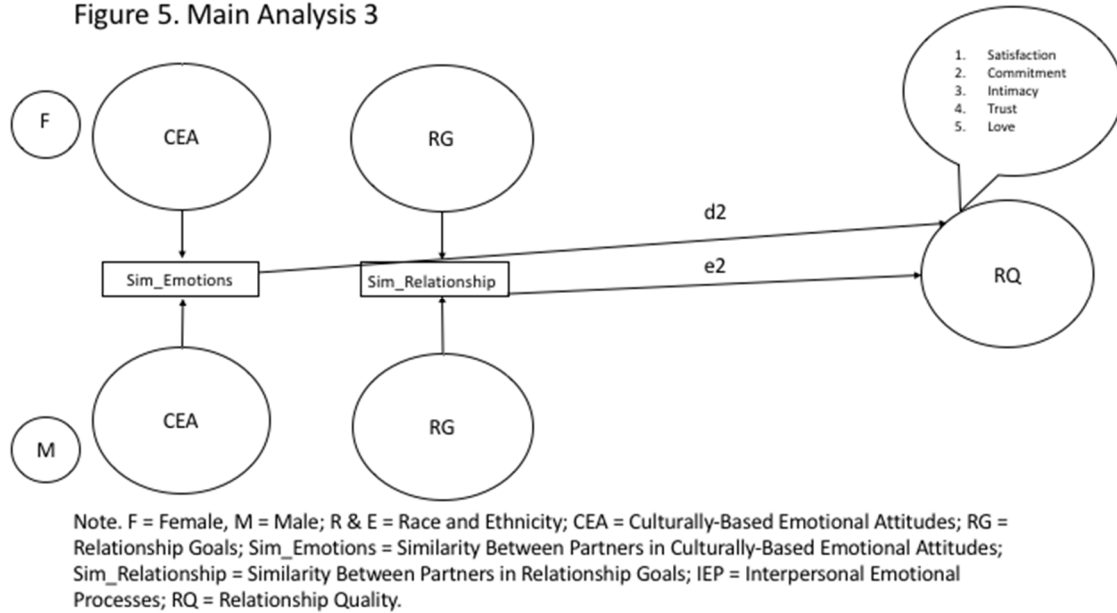
Next, a series of eighteen separate dyadic regression models were used to examine Sim\_Emotions and Sim\_Relationship as predictors of each major outcome (interpersonal emotional processes and relationship quality) for each partner. More specifically, to test whether Sim\_Emotions or Sim\_Relationship predicted each interpersonal emotional process (see Figure 4), a series of dyadic regression models were examined with both partners' interpersonal emotional processes during each of the four conversations as outcome variables. However, when testing whether Sim\_Emotions or Sim\_Relationship predicted emotional synchrony (averaged across all conversations), one regular regression model was examined for each predictor due to the dyadic nature of synchrony (e.g., a dyad has only one score for synchrony, not one for each partner; see Figure 4).

Figure 4. Main Analysis 2



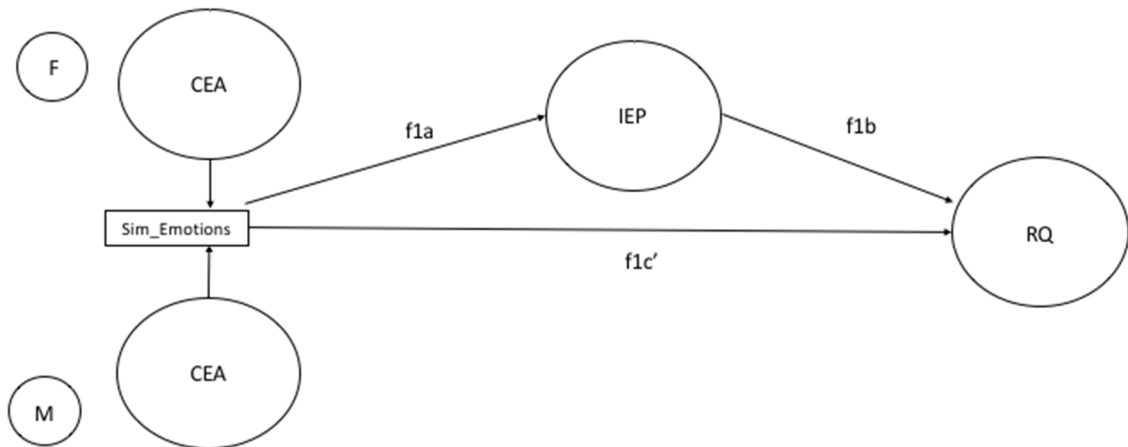
Finally, two dyadic regression model were used to determine whether Sim\_Emotions or Sim\_Relationship predicted the composite score of relationship quality for either partner (see Figure 5).

Figure 5. Main Analysis 3



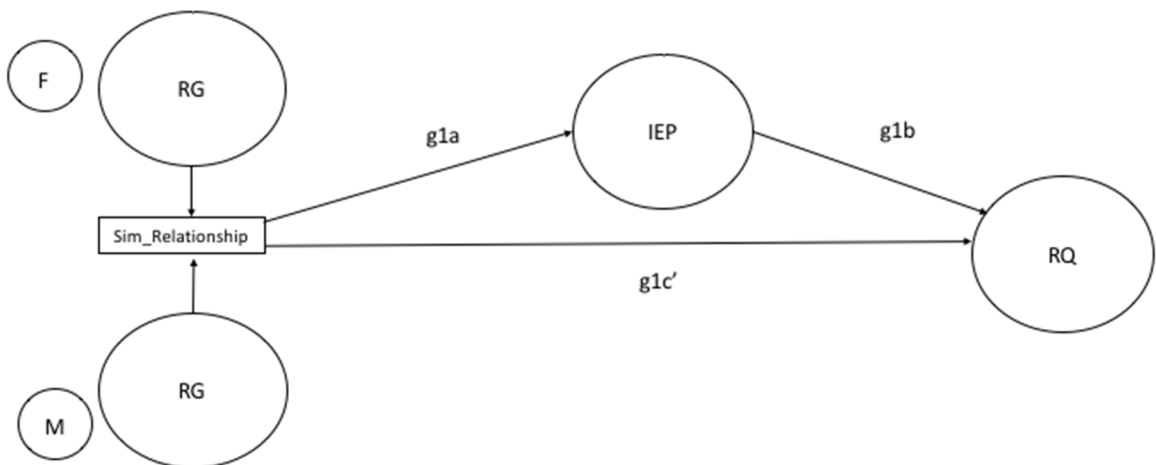
*Exploratory analysis.* Lastly, to further understand the various constructs in the model a total of forty-three separate multilevel models were used to determine whether any of the interpersonal emotional processes in any of the four conversations functioned as mediators between Sim\_Emotions or Sim\_Relationship and relationship quality (see Figure 6 and 7). For these analyses, I used bootstrapping as recommended by Preacher and Hayes (2008). Bootstrapping involves the repeated extraction of samples from the data set (e.g., 10,000 samples) and the estimation of the indirect effect in each resampled data set. Bootstrapping is a well-known contemporary approach for smaller sample sizes because it maximizes statistical power and provides a robust test of the indirect effects compared to traditional classical mediation methods (e.g., Sobel Test, Monte Carlo, etc.) given that these approaches rely on assumptions of normality (Shrout & Bolger, 2002). Bootstrapping permits the construction of a 95% confidence interval (CI) for the effect size of each indirect effect. If the values of the estimated effect sizes within the CI do not include zero, a statistically significant mediation effect is indicated.

Figure 6. Exploratory Analysis 1



Note. F = Female, M = Male; CEA = Culturally-Based Emotional Attitudes; Sim\_Emotions = Similarity Between Partners in Culturally-Based Emotional Attitudes; IEP = Interpersonal Emotional Processes; RQ = Relationship Quality.

Figure 7. Exploratory Analysis 2



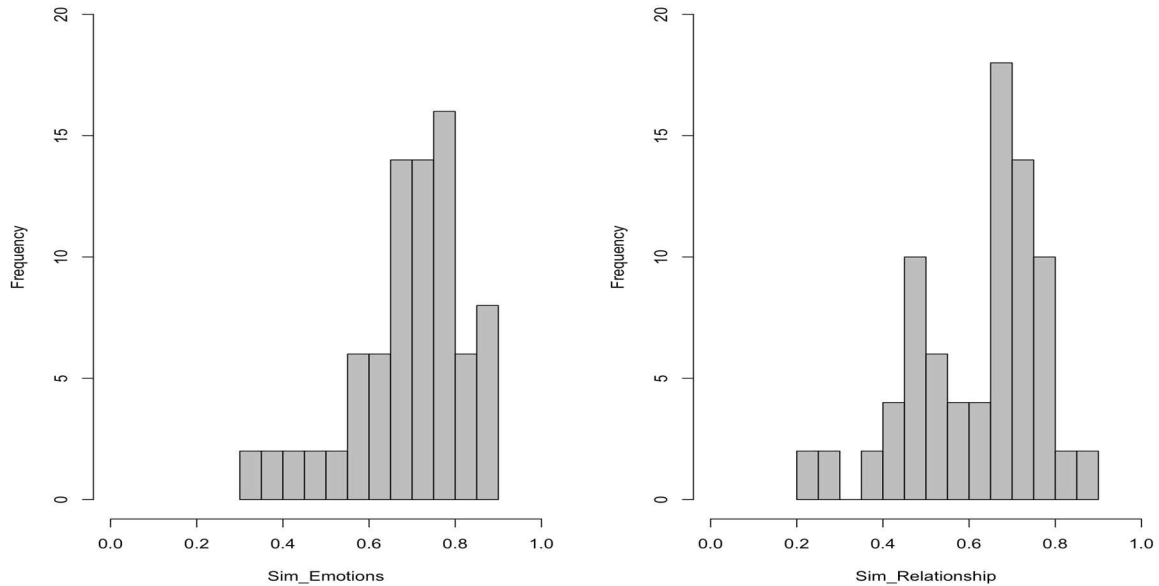
Note. F = Female, M = Male; RG = Relationship Goals; Sim\_Relationship= Similarity Between Partners in Relationship Goals; IEP = Interpersonal Emotional Processes; RQ = Relationship Quality.

## CHAPTER IV: RESULTS

Demographic statistics are displayed in Table 2. In the final sample (N = 80 individuals in 40 couples), the majority of couples self-identified as coming from different racial and ethnic backgrounds (n = 16), followed by different racial, ethnic, language, and/or religious backgrounds (n = 14), or different racial, ethnic, and religious backgrounds (n = 11). Additional intercultural couple types can be found in Table 3. Moreover, the majority of individuals racially and ethnically self-identified being Caucasian (n = 35) or Hispanic (n = 23). This racial and ethnic identification breakdown can be found in Table 4. Lastly, a correlation table with all variables of interest can be found in Table 5.

Profile correlations of Sim\_Emotions (i.e., similarity of culturally-based emotional attitudes) and Sim\_Relationship (i.e., similarity of relationship goals) are shown in Figure 8. Theoretically, descriptive profile correlations can range from -1.00 (opposite or different) to 1.00 (shared or similar), but in my results negative values were not observed and the profile correlations for each domain (emotional attitudes and relationship goals) ranged from 0.20 (weakly related) to 0.90 (highly similar), respectively.

Figure 8. Profile Correlations



### Preliminary CBR<sup>2</sup> Results

To begin, culturally-based emotional attitudes and relationship goals for each partner were predicted from an individual's own racial/ethnic identification, sex and their interaction (see Figure 2, paths a1, a2, b1, b2). There were no main effects or interaction effects found for culturally-based emotional attitudes (all  $p$ 's > .70) or relationship goals (all  $p$ 's > .50). Moreover, no association was found (all  $p$ 's > .50) between culturally-based emotional attitudes and relationship goals within-person (see Figure 2, paths a3 and b3), nor was there an interaction between relationship goals and sex when predicting culturally-based emotional attitudes.

### Main CBR<sup>2</sup> Results

The first model examined the association between partner's Sim\_Emotions and Sim\_Relationship (see Figure 3). An association was found where Sim\_Emotions predicted Sim\_Relationship ( $t(80) = 3.59, b = .41, p = .001$ ). As shown in Figure 3, similar culturally-based emotional attitudes predicted similar relationship goals between partners.

The second set of models focused on Sim\_Emotions and Sim\_Relationship as predictors of each interpersonal emotional process including: 1) *responsiveness* to emotional disclosure from partner, 2) *own emotion regulation*, 3) *partner effectiveness*, 4) physiological arousal (*heart rate* and *EDA*), and 5) *emotional synchrony* as major outcome variables (see figure 4). Additionally, the third set of models focused on Sim\_Emotions and Sim\_Relationship as predictors of relationship quality (see figure 5).

*Sim\_Emotions*. Contrary to my hypotheses, Sim\_Emotion was either unrelated to *responsiveness* across conversation topics 2-3 (all  $p$ 's >.05), or associated in the opposite direction to what I expected in conversation 1 ( $t(80) = -2.73$ ,  $b = -2.04$ ,  $p = .001$ ). More specifically, Sim\_Emotions predicted lower responsiveness to emotional disclosure from partner in sharing a positive event. In addition, Sim\_Emotion was unrelated to *own emotion regulation* (all  $p$ 's >.05), *partner's effectiveness* (all  $p$ 's >.05), and *physiological arousal* via heart rate and EDA for each participant (all  $p$ 's >.05) across all conversation topics. Lastly, contrary to my hypothesis, Sim\_Emotion showed no association with emotional synchrony (all  $p$ 's >.05) in all four conversations nor was it associated with relationship quality (all  $p$ 's >.05).

*Sim\_Relationship*. Overall, Sim\_Relationship was a consistent predictor of several interpersonal emotional processes. In support of my hypothesis, Sim\_Relationship was related to greater *responsiveness* across conversations 1-3 (conversation 1:  $t(80) = 2.59$ ,  $b = 1.65$ ,  $p = .01$ ; conversation 2:  $t(80) = 3.40$ ,  $b = 2.98$ ,  $p = .001$ ; conversation 3:  $t(80) = 2.63$ ,  $b = 2.72$ ,  $p = .01$ ) but not conversation 4 ( $p = .06$ ). More specifically, similar relationship goals between partners predicted greater responsiveness to emotional disclosure from partner in both positive and negative topics, and to greater responsiveness when discussing a relationship disagreement, but not in the sharing of first-dates.

Contrary to hypothesis, Sim\_Relationship was unrelated to *alerting* across conversation topics 1-4 (all  $p$ 's  $>.05$ ). However, in support of my hypothesis, Sim\_Relationship was related to the other *own emotion regulation* strategies in several conversation topics. More specifically, Sim\_Relationship was related to more *composure* in conversation 1 ( $t(80) = 2.14, b = 2.29, p = .034$ ). In other words, similar relationship goals between partners predicted greater attempts to remain *relaxed* when sharing a positive event with partner. Sim\_Relationship was also related to greater *calmness* in conversation 2 ( $t(80) = 3.30, b = 2.02, p = .001$ ). In other words, similar relationship goals between partners predicted greater attempts to remain *calm* when sharing a negative event with partner. Similarly, Sim\_Relationship was related to higher *calmness* ( $t(80) = 2.90, b = 2.72, p = .004$ ) and *composure* ( $t(80) = 2.16, b = 1.90, p = .034$ ) in conversation 3. In other words, similar relationship goals between partners predicted higher attempts to remain *calm* and *relaxed* when sharing a relationship conflict with partner. Lastly, Sim\_Relationship was related to greater *composure* ( $t(80) = 2.21, b = 2.48, p = .029$ ) in conversation 4. In other words, similar relationship goals between partners predicted higher attempts to remain *relaxed* when recalling a first-date.

Also in support of my hypotheses, Sim\_Relationship was related to *partner's effectiveness* across conversation 2-4 (but not conversation 1:  $p = .11$ ). Further analysis revealed that this was specific to partner's use of *calmness* in conversation 2 ( $t(80) = 3.30, b = 2.02, p = .001$ ) and conversation 3 ( $t(80) = 3.23, b = 3.11, p = .002$ ), and to partner's use of *composure* in conversation 4 ( $t(80) = 2.21, b = 2.48, p = .029$ ) but unrelated to *alerting* across conversation topics 1-4 (all  $p$ 's  $>.05$ ). In other words, similar relationship goals between partners predicted higher perceived partner effectiveness in helping to feel *calmer* and *relaxed* in the sharing of a negative event, a relationship conflict, and recall of a first-date.



Contrary to my hypothesis, however, Sim\_Relationship was unrelated to *physiological arousal* via heart rate and EDA for each participant (all  $p$ 's  $>.05$ ) or *emotional synchrony* (all  $p$ 's  $>.05$ ) across all conversation topics. Lastly, in support of my hypothesis, Sim\_Relationship showed a positive association with relationship quality ( $t(80) = 2.10, b = 4.12, p = .01$ ). In other words, similar relationship goals between partners predicted higher levels of relationship quality which included satisfaction, commitment, intimacy, trust, and love.

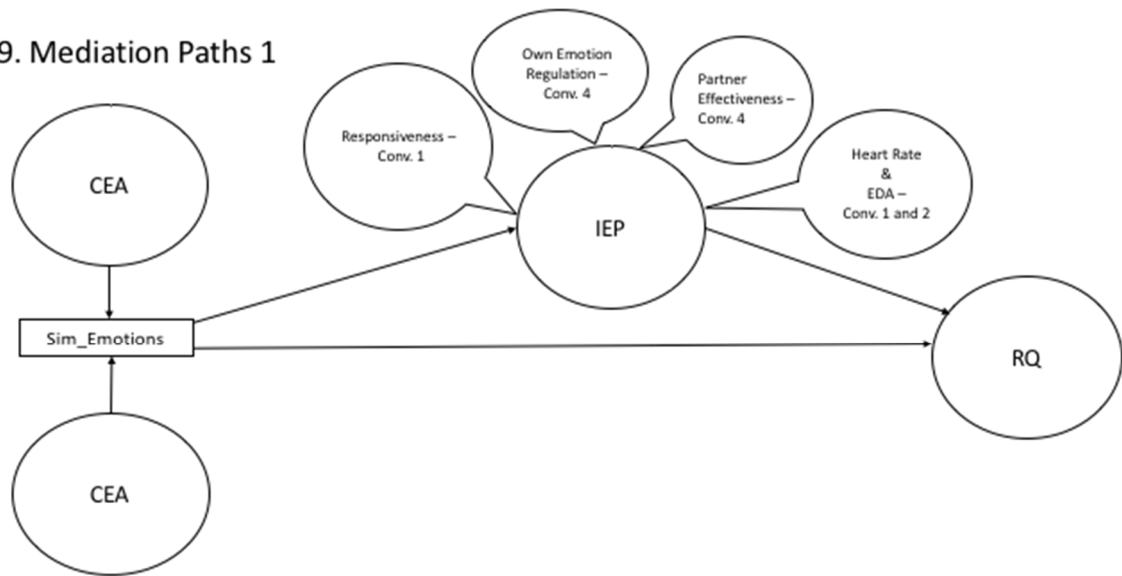
### Exploratory CBR<sup>2</sup> Results

A total of forty-three separate models were used to test whether any interpersonal emotional process for any of the four conversations functioned as a mediator between Sim\_Emotions or Sim\_Relationship and relationship quality (see Figure 6 and 7), using bootstrapping analysis as recommended by Preacher and Hayes (2008). See Table 6 for the path estimates and indirect effects by bootstrapping the sample 1000 times and considering a 95% confidence interval. The following section provides the results for models where the 95% confidence interval for the indirect effect ( $a*b$ ) did not include zero and thus, signify evidence in favor of a mediation effect. Each bootstrapped unstandardized indirect effect is reported below.

*Sim\_Emotions*. Several mediation effects were found between Sim\_Emotions and relationship quality via *responsiveness* (conversation 1:  $a*b = -0.77, SE = 0.24, 95\% CI [-1.30 to -0.34]$ ), *own emotion regulation* (conversation 4:  $a*b = -0.44, SE = 0.15, 95\% CI [-0.85 to -0.27]$ ), *partner effectiveness* (conversation 4:  $a*b = -0.08, SE = 0.19, 95\% CI [-0.82 to -0.04]$ ), and *physiological arousal* via heart rate (conversation 1:  $a*b = 3.14, SE = 0.48, 95\% CI [1.78 to 3.59]$ ; conversation 2:  $a*b = 2.12, SE = 0.54, 95\% CI [0.51 to 2.6]$ ) and EDA (conversation 1:  $a*b = .12, SE = 0.15, 95\% CI [0.16 to .10]$ ; conversation 2:  $a*b = .05, SE = 0.11, 95\% CI [0.07 to .02]$ ). These results suggest that similar culturally-based emotional attitudes between partners

are indirectly related to lower relationship quality through its association with *lower responsiveness* in sharing a positive event, lower attempts to *regulate own emotions*, and lower *partner effectiveness* when sharing first-dates. In contrast, similar emotional attitudes between partners predicted greater *physiological arousal* via heart rate and EDA when sharing positive or negative events and as a result better *relationship quality*. Figure 9 shows the relationship between Sim\_Emotions and relationship quality mediated by these specific interpersonal emotional processes.

Figure 9. Mediation Paths 1

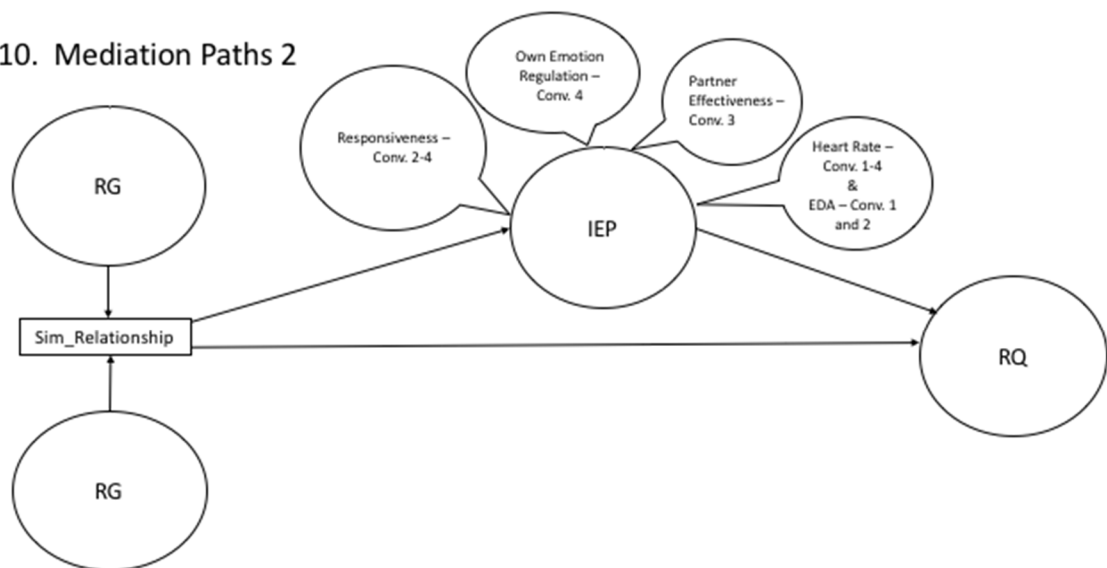


Note. F = Female, M = Male; R & E = Race and Ethnicity; CEA = Culturally-Based Emotional Attitudes; Sim\_Emotions = Similarity Between Partners in Culturally-Based Emotional Attitudes; IEP = Interpersonal Emotional Processes; RQ = Relationship Quality.

*Sim\_Relationship*. Several mediation effects were also found between Sim\_Relationship and relationship quality via *responsiveness* (conversation 2:  $a*b = 0.40$ ,  $SE = 0.28$ , 95%  $CI [1.46$  to  $0.38]$ ; conversation 3:  $a*b = 0.50$ ,  $SE = 0.22$ , 95%  $CI [1.08$  to  $0.21]$ ; conversation 4:  $a*b = 0.51$ ,  $SE = 0.17$ , 95%  $CI [0.81$  to  $0.13]$ ), *own emotion regulation* (conversation 4:  $a*b = 0.54$ ,  $SE = 0.15$ , 95%  $CI [0.38$  to  $0.98]$ ), *partner effectiveness* (conversation 3:  $a*b = 1.06$ ,  $SE = 0.25$ , 95%  $CI [0.47$  to  $1.44]$ ), and *physiological arousal* via heart rate (conversation 1:  $a*b = 2.30$ ,  $SE =$

0.39, 95% CI [0.96 to 2.31]; conversation 2:  $a*b = 2.92$ ,  $SE = 0.46$ , 95% CI [1.76 to 3.47]; conversation 3  $a*b = 3.05$ ,  $SE = 0.48$ , 95% CI [1.85 to 3.72]; conversation 4:  $a*b = 3.01$ ,  $SE = 0.43$ , 95% CI [1.97 to 3.59]) and EDA (conversation 1:  $a*b = 0.02$ ,  $SE = .008$ , 95% CI [0.04 to 0.02]; conversation 2:  $a*b = 0.04$ ,  $SE = 0.01$ , 95% CI [0.06 to 0.02]). These results suggest that similar relationship goals between partners are indirectly related to better relationship quality through its association with greater *responsiveness* in sharing a negative event, a relationship conflict, and the sharing of first-dates. Likewise, the results also suggest that similar relationship goals between partners are indirectly related to better relationship quality through its association with higher attempts to *regulate own emotions* in sharing first-dates, greater *partner effectiveness* in the sharing of a relationship conflict, and lastly through its association with higher *physiological arousal* via heart rate across all conversation topics and EDA when sharing a positive event and a relationship concern. Figure 10 shows the relationship between Sim\_Relationship and relationship quality mediated by these specific interpersonal emotional processes.

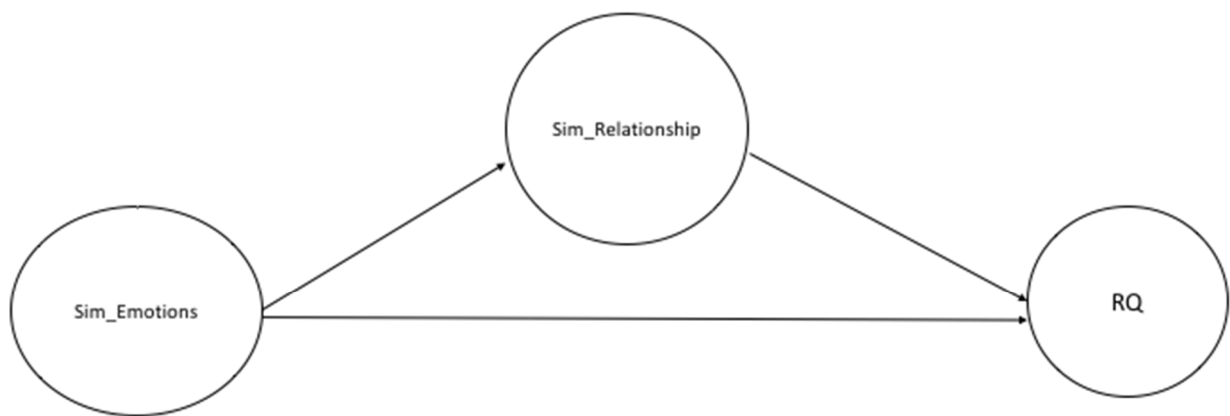
Figure 10. Mediation Paths 2



Note. Conv. = Conversation; RG = Relationship Goals; Sim\_Relationship= Similarity Between Partners in Relationship Goals; IEP = Interpersonal Emotional Processes; RQ = Relationship Quality.

Lastly, a mediation effect was found between Sim\_Emotions and relationship quality via *Sim\_Relationship* ( $a*b = 0.19$ ,  $SE = 0.28$ , 95%  $CI [0.10 \text{ to } 0.19]$ ). The results suggest that similar emotional attitudes between partners are indirectly related to better relationship quality through its association with similar relationship goals between partners. Figure 11 shows the relationship between Sim\_Emotions and relationship quality mediated by Sim\_Relationship.

**Figure 11. Mediation Path 3**



Note. Sim\_Emotions = Similarity Between Partners in Culturally-Based Emotional Attitudes; Sim\_Relationship = Similarity Between Partners in Relationship Goals; RQ = Relationship Quality.

## Summary of Results

In summary, the results provide evidence both for and against the various paths in the CBR<sup>2</sup> model. First, an individual's own racial and ethnic identifications were not predictors of culturally-based emotional attitudes or relationships goals, nor were within-person culturally-based emotional attitudes related to relationship goals. Second, in contrast, partner's similar culturally-based emotional attitudes related to relationship goals. Third, in contrast, partner's similar culturally-based emotional attitudes (Sim\_Emotions) was a predictor of similar relationship goals (Sim\_Relationship). Third, the series of models that focused on Sim\_Emotions and

Sim\_Relationship as predictors of each major model outcome both supported and contradicted my hypotheses. More specifically, Sim\_Relationship was the most reliable predictor of several interpersonal emotional processes in comparison to Sim\_Emotions. Lastly, there appears to be several mediation effects holding promising and consistent associations between Sim\_Emotions and Sim\_Relationship as predictors of each major outcome (interpersonal emotional processes and relationship quality) for each partner. Overall, the results provide partial support for certain paths in the CBR<sup>2</sup> model.

## CHAPTER V: DISCUSSION

The primary purpose of this study was to test the newly developed CBR<sup>2</sup> theoretical model in intercultural couples. Overall, the findings provide a mix of support and opposing evidence with respect to the paths that I hypothesized. In support, Sim\_Relationship was positively associated with responsiveness, emotion regulation, partner effectiveness, and relationship quality. In addition, Sim\_Emotions had an indirect positive association with relationship quality via Sim\_Relationship. In contrast, in terms of direct paths, Sim\_Emotions was associated in the opposite direction to what was expected or yielded null results. In addition, neither Sim\_Emotions nor Sim\_Relationship were associated with physiological arousal or emotional synchrony across all conversation topics. Lastly, a few mediation effects were identified between Sim\_Emotions and Sim\_Relationship and relationship quality, via interpersonal emotional processes. I summarize the key findings in the following sections.

### **Preliminary CBR<sup>2</sup> Findings**

Several previous empirical studies have assessed people's own racial and ethnic identification as predictors of cultural differences in emotion, behavior, and social relationships (Matsumoto et al., 2008; Mesquita & Frijda, 1992; Tsai, 2007; Tsai et al., 2006). Although race and ethnicity continue to be the main points of attention for cross-cultural scholars and mainstream research, as expected my findings indicate limitations of this approach. The results revealed no connection between individual's own racial and ethnic identification or sex and culturally-based emotional attitudes or relationship goals. These null results draw attention to the fact that assessments of culture other than race and ethnicity may have greater potential to enhance theoretical understanding of why cultural differences may or may not exist across populations (Lehman, Chiu, & Schaller, 2004).

More specifically, my results suggest that it may be more appropriate to measure the psychological elements of culture, such as the adoption of certain cultural beliefs/values, and not external cultural artifacts (e.g., race, ethnicity, sex) that may lead to different social interactions in close relationships (Greenfield, 2000; Latane, 1996). Sometimes a person's sex, racial, or ethnic identification may not line up with their adopted set of beliefs, attitudes, and worldviews. My preliminary findings suggest that individual's self-reported sexual, racial, or ethnic identification are poor proxies for explaining cultural differences in emotional attitudes and relationship goals. More broadly, the findings fit with a view of culture as a multi-faceted construct defined by a set of distinct beliefs and values that are practiced, shared, and retained over long periods of time across groups of people. Thus, cultural differences may be in part explained by the ways in which people adopt certain cultural beliefs/values that evolve over time as part of an individual's psyche which, emerge as unintended byproducts in interpersonal interactions (Bourgeois, 2002; Lehman et al., 2004). The psychological elements of culture such as beliefs/values can alter objective reality through behavioral and physiological mechanisms. With the increase of cultural diversity in the U.S. and high capacity to acculturate, future studies should continue to challenge approaches to cultural assessment and enhance appropriate interpersonal approaches to healthy relationship functioning (e.g., relationship quality) in close relationships.

Lastly, another opportunity presented from testing the CBR<sup>2</sup> involves the limitation of focusing on the individual when trying to understand social relationships and relationship outcomes. For example, my findings suggested a non-existent relationship between culturally-based emotional attitudes and relationship goals at the individual level, versus an existing relationship between profile correlations of partner's Sim\_Emotions and Sim\_Relationship. This

is an important finding in that individual-level components of a person (i.e., the degree to which an individual is like the average person) may not directly capture couple-level characteristics related to relationship quality (Humbad, Donnellan, Iacono, McGue, & Burt, 2013). Therefore, it is necessary for future studies to consider both individual and dyad-level predictors, since dyad-level predictors in my study (Sim\_Emotions, Sim\_Relationship) were more informative than at the individual level. Adopting this analytic approach in future studies may help to minimize the potential for producing misleading results.

### **Main CBR<sup>2</sup> Findings**

Culturally informed beliefs and values that are shared between partners are the heart of the CBR<sup>2</sup> model and were assessed with profile correlations in the present study. The first profile correlation, Sim\_Emotions, represented the similarity of culturally-based emotional attitudes between partners and the second profile correlation, Sim\_Relationship, represented the similarity of relationships goals between partners. Considering that profile correlations capture each couple's similarity in terms of their pattern of responses, profile correlations are sensitive to the varying degrees of consensus between Partner A and Partner B for a given domain (Chi, Epstein, Fang, & Lam, 2013). This allowed me to examine the link between dyadic similarity of partners in the CBR<sup>2</sup> model in relation to interpersonal emotional processes and relationship quality.

As hypothesized, the findings indicated that at the dyadic level Sim\_Emotions predicted Sim\_Relationship, even though they were not associated at the individual level. This supports previous studies that have found that individuals who share emotional attitudes also tend to share ways of expressing emotions to others and to engage in shared goal-directed behaviors (Emmons & King, 1988; Rusbult & Van Lange, 2003). For example, when two people are emotionally in synch in terms of wanting to feel a certain way their conversations and interactions sustain



reciprocal exchanges of emotional ideas and desires. When they interact, they build on one another's ideas creating synergy and mutual ways of expressing emotions. Conflict then becomes much easier to navigate because partners want to reach the same shared ending goal. Discussing and establishing similar relationship goals early on may promote mutually supportive behaviors between partners and thereby, prevent unpleasant interpersonal interactions and contribute to long-lasting healthy relationships (Gonzaga, Campos, & Bradbury, 2007). My findings add to these studies by utilizing culturally-defined emotional attitudes and relationship goals in the study of dyadic similarity and suggest that partners who have more similar cultural beliefs in the domain of emotional values (i.e., expression of emotions and ideal affect) are inclined to share similar cultural beliefs and values in relationship goals as well (i.e., defining love, expressing love, and conflict approach). Overall these results suggest that similar emotional aspects across partners are related to similar goal-directed behaviors pursued by individuals in close relationships (Flecher et al., 1999).

***Sim\_Emotions as a predictor of interpersonal emotional processes and relationship quality.*** Contrary to my hypothesis, Sim\_Emotions was associated with lower *responsiveness* from a partner when sharing a positive event, and showed no associations across all other outcomes across all four conversation topics. These findings may suggest the need for future studies to examine whether Sim\_Emotions between partners may be more effective when measured through both actual affect (how they in reality express their emotions) versus ideal affect (how they preferably would like to express their emotions). For example, some partners may strive to experience desired emotions, yet this may be different from the correspondence of actual emotional experience when interacting with each other. Naturally this may lead to a discrepancy between an individual's actual affect versus ideal affect, which may relate to

experiencing lower positive emotions when interacting with their partner and poor relationship quality (Scheibe, English, Tsai, & Carstensen, 2013). Thus, it is important to consider the discrepancy between ideal affect and actual affect at a dyadic level to understand whether partners are accurately meeting each other's emotional expectations and needs during interpersonal interactions. Future studies should consider measuring profile correlations of both actual affect and ideal affect to provide a comprehensive understanding of how emotional similarities in these domains are related to healthy relationship functioning across different conversation topics.

Moreover, my findings showed that Sim\_Emotions had both positive and negative indirect effects on relationship quality, which varied depending on the function and context being examined. For example, emotional similarity between partners was associated with physiological arousal, possible due to active engagement between partners, and thereby higher relationship quality. Yet, emotional similarity between partners also reduced responsiveness and own emotion regulation, and thereby was indirectly associated with lower relationship quality. Based on these results, the association between Sim\_Emotions and relationship quality may change in direction based on the emotional contexts in which it is expressed and on the type of interpersonal emotional processes being examined. These current findings combined with future dyadic longitudinal studies may provide a clearer understanding of the dynamic associations among relationship variables that may have both positive and negative effects behind successful relationships (Gottman & Levenson, 2000; Hershenberg et al., 2016). It is important for future studies to continue to investigate both the positive and negative effects of Sim\_Emotions. It may be the case that their presence may be needed to build strong quality relationships between partners for the long-run.

Although cross-cultural theories propose that the functional impact of emotions in social interactions differs across cultures, my lack of finding for Sim\_Emotions as a predictor suggest that this similarity/difference in partners is not a simple emotional characteristic for enhancing healthy relationship functioning in intercultural couples (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005). Thus, it may be important to examine whether partner similarities in their use of specific emotion regulation strategies or the degree to which they are emotionally flexible (i.e., recognize, release, and adjust emotions in changing situations) are associated with effective interpersonal processes across different conversation topics. Given that higher quality relationships require a certain amount of flexibility from each partner to be able to meet the needs of both partners, future studies should consider measuring whether similarity in emotional flexibility between partners prompts long-term success and healthy relationship quality in intercultural couples (Davila et al., 2017).

Lastly, despite the lack of direct associations between Sim\_Emotions and the outcome variables in this study, it remains an important part of the model since partner similarities in culturally-based emotional attitudes was associated with partner similarities in relationship goals, which in turn was associated with effective interpersonal emotional processes and higher relationship quality (Sanbonmatsu, Uchino, & Burmingham, 2011).

***Sim\_Relationship as a predictor of interpersonal emotional processes and relationship quality.*** My findings revealed that Sim\_Relationship was a consistent predictor of several major outcomes, including greater *responsiveness* in conversation topics 1-3. These findings align with previous studies that indicate that compatible relationship goals are important to effectively respond to partner's emotional needs (Chartrand et al., 2006; Emmons & Kings, 1988; Kappes & Schrouf, 2010). Not surprisingly previous studies have found that healthy couples tend to review

and discuss their goals regularly, which generate an upward spiral of receptiveness and relationship wellbeing (Canavello & Crocker, 2010). Adding to this literature, my findings suggest that similar relationship goals between partners may increase effective maintenance strategies, leading partners to feel more emotionally satisfied about sharing diverse emotional events with each other (Gere, Schimmack, Pinkus, & Lockwood, 2011; Rusbult & Van Lange, 2008). Future studies should investigate whether the perception of collaborative recollection of intimate events and the sharing of emotions from those events are related to other forms of effective interpersonal emotional processes (e.g., mood, degree of expressivity) on a day-to-day basis.

In addition, my findings showed associations between Sim\_Relationship and *own emotion regulation* across all conversation topics. More specifically, Sim\_Relationship predicted higher use of *composure* when disclosing positive and negative events, higher own use of *calmness* and *composure* when discussing a conflict, and higher use of *composure* when recalling a first-date. In other words, similar relationship goals between partners was associated with attempting to feel calm and relaxed when sharing emotional events with partner. In line with this, prior studies highlight the importance of considering different contexts to understand the spontaneous use of emotion regulation strategies such as reappraisal and suppression (Dixon-Gordon, Aldao, De Los Reyes, 2015). Adding to this literature, my findings indicate that an individual's use of calmness and composure has a dyadic motivation, one that may be in part explained by the sharing of similar goals between partners in both positive and negative emotional conversations (Harmon-Jones, Gable, & Price, 2011). The sharing of similar goals between partners may increase use of calmness and composure as ways to demonstrate support and love when disclosing intimate events (Hofmann et al., 2016; Williams, Morelli, Ong, &

Zaki, 2018). Yet, it remains unclear whether this motivation is conscious for partners and whether the use of calmness and composure are effective in response to external events not related to the relationship. Given that to my knowledge no studies have focused on these strategies, more research is needed to support current findings and to expand our understanding across other day-to-day conversation topics amongst couples (Aldao, 2013; Dixon-Gordon et al., 2015).

Associations were also found between Sim\_Relationship and *partner effectiveness* in using interpersonal emotion regulation across conversation topics. For example, Sim\_Relationship predicted higher partner effectiveness for the use of *calmness* when discussing negative emotions or conflict. These findings align with prior studies that suggest that mutually shared personality traits between partners allows couples to quickly provide efficient and appropriate emotional support during disagreement (Batool & Khalid, 2009; Dijkstra & Barelds, 2010). It may be the case that partners who hold similar goals may as a result be more able to properly respond to each other, given that the sharing of similar relationship goals assists in expressing affection to the partner (e.g., listening, agreeing, trust), which extends feelings of calmness, deescalates feelings of distress, and shifts the interaction between partners into a more loving one (Barelds & Barelds-Dijkstra, 2010; Polk & Ekbert, 2013). As a result, this may benefit the relationship in the long-run by having partners communally resolve problems and increase open communication as the relationship progresses (Baker, McNulty, & Overall, 2014; Barelds & Barelds-Dijkstra, 2010; Ireland et al., 2011).

In contrast to my hypotheses, however, my findings showed no associations between Sim\_Relationship and *physiological arousal* (assessed with mean heart-rate and EDA for each partner) or couple's *emotional synchrony* in any of the conversation topics. This generally

supports previous studies that have found more cultural similarities than differences in emotional responding, especially for the physiological component of emotion. For example, Tsai and colleagues (2002) found no cultural differences in physiological arousal between European American and Hmong American participants yet, greater cultural differences in facial expressions when asked to relive different emotional episodes in their lives. This presumably may be due to the fact that physiological responding (e.g., how fast an individual's heart beats) is a basic human requirement that may be less subject to cultural variation compared to other forms of emotional responding (e.g., subjective experience, facial expression, behavior, etc.). Thus, this may require future studies to incorporate other measures of arousal (e.g., brain arousal in the ventromedial frontal cortex with fMRI) to determine whether similar cultural beliefs/values between partners are related to physiological arousal. Similarly, the lack of association with emotional synchrony also suggests the need for future studies to incorporate more sophisticated analytic models to help us understand if there is an association between similarity in cultural beliefs/values between partners and more specific forms of emotional coordination (e.g., in-phase and anti-phase synchronization) (Butler, 2011).

Lastly, a positive association was found between Sim\_Relationship and relationship quality. More specifically, similar relationship goals between partners predicted higher relationship quality. This finding supports previous studies that have found that people's individual goals contribute to the quality of their relationship (Canavello & Crocker, 2010; Gere & Schimmack, 2013). My findings add to this literature and suggest that the dyadic nature of sharing similar goals between partners may create upward spirals of responsiveness, which may ultimately enhance relationship quality for each partner. Overall, my results provide a starting point for future theoretical and empirical work that I hope will result in the development of a

more nuanced and sophisticated understanding of the connections between couple similarities and their influence on interpersonal emotional process and healthy relationship functioning.

### **Exploratory CBR<sup>2</sup> Findings**

To gather a richer understanding of the relationships amongst the variables in the CBR<sup>2</sup> model, I conducted an exploratory mediation analysis. My general prediction was that Sim\_Emotions and Sim\_Relationship would be associated with interpersonal emotional processes, which in turn would be related to relationship quality. These predictions are in line with previous studies suggesting that couples who hold similar personal characteristics and goals are more effective at resolving conflict, which in turn fosters favorable relationship outcomes (Goodfriend & Agnew, 2008; Gottman, 1994; Gottman & Levenson, 1992; Le & Impett, 2013; Levenson et al., 1994; Meyer et al., 2015; Rosand et al., 2014; Stanley & Markman, 1992). My findings add to this literature by testing these associations across different emotional conversation topics and across different interpersonal emotional processes in a cross-cultural context.

Overall, my findings suggest that Sim\_Emotions and Sim\_Relationship are important predictors of interpersonal emotional processes, which in turn contribute to relationship quality (Laurenceau, Barrett, & Pietromonaco, 1998). The pattern of results suggested that about half of the possible models showed evidence in favor of a mediation effect. More specifically, *responsiveness*, *own emotion regulation*, *partner effectiveness*, and *physiological arousal* all provided an indirect path between Sim\_Emotions and relationship quality, despite the fact that there was no direct association between them. Contrary to predictions, however, similar emotional attitudes between partners related to lower *responsiveness* and lower *partner effectiveness* and thus, poor relationship quality. In contrast, similar emotional attitudes between

partners related to similar relationship goals between partners and thus better relationship quality. Also in contrast, similar emotional attitudes between partners related to higher *own emotion regulation* and *physiological arousal* via heart rate and EDA, and thus greater relationship quality. Moreover, *responsiveness*, *own emotion regulation*, *partner effectiveness*, and *physiological arousal* mediated the effect between Sim\_Relationship and relationship quality. More specifically, similar relationship goals between partners related to higher *responsiveness*, higher *own emotion regulation*, higher *partner effectiveness*, and higher *physiological arousal* and thus, better relationship quality.

The results of these exploratory analyses contribute to the literature in several ways. First, my findings provide support for previous work that has touched on the idea that similarities between partners are related to constructive dyadic modes of emotional expression, emotional states, and emotional responses to-and-from partner (Aldao, 2013; Aldao & Nolen-Hoeksema, 2012; Dixon-Gordon et al., 2015). Yet, my results suggest that these effects are more complex than initially proposed, which seem to vary across different emotional conversation topics and the degree to which partners are similar in relationship goals, compared to the degree to which partners are similar in emotional attitudes. Future studies should consider other specific emotional contexts in which partners are dependent on each other's emotional responses (e.g., disclosing an illness or a stressful event, etc.) and the degree to which other similarities between partners in emotional attitudes (e.g., flexibility, actual affect) may built healthy relationship functioning. This would require testing alternative versions of the CBR<sup>2</sup> model, including other causal links that are consistent with characterizations of emotional interdependence in close relationship processes.

Second, my findings suggest that holding similar cultural beliefs/values with respect to



relationship goals between partners is essential to providing a balanced emotional interaction across different conversation topics and thereby, increasing relationship quality. An avenue for future research is to further examine whether this similarity may contribute to a cycle of feeling understood on the part of the partner, which may be associated with greater emotional intimacy and trust, thereby promoting lower negative emotional experiences and conflict. In addition, my findings underscore the importance of further testing whether other aspects of partner similarities (e.g., acculturation to partner's emotional beliefs/values) are associated with effective interpersonal emotional processes and the extent to which they drive changes in emotion regulation over time in intercultural couples (Bisin & Verdier, 2000; Shahid & Kazmi, 2016). It may be the case that change in the direction of becoming more similar in how partners regulate their own emotions may increase feelings of acceptance and thereby, promote effective interpersonal emotional processes in the long-run, particularly when partners come from opposing backgrounds of regulating their emotions (e.g., expression versus suppression).

Third, my findings suggest that Sim\_Emotions and Sim\_Relationship are associated with higher *physiological arousal* via heart rate and EDA during emotional interactions between partners, which in turn is associated with better relationship quality (Lim, 2016; Ma-Kellams, Blascovich, & McCall, 2012; Murata et al., 2013). Although previous studies suggest that physiological arousal is related to poor relationship outcomes (Levenson & Gottman, 1983; Rick et al., 2017), my findings suggest that when partners hold similar emotional attitudes and relationship goals, partners become more physiologically aroused, and this is associated with greater relationship quality. It appears that when it comes to the act of disclosing information to a partner across different conversation topics, physiological arousal (i.e., increased heart rate and EDA) is favorable given that it may lead to higher attention to partner's disclosure, alertness,

clarity, effective response to partner, and feelings of load sharing (Lougheed, Koval, & Hollenstein, 2016; Umberson & Montez, 2010). Future studies should continue to investigate whether Sim\_Emotions and Sim\_Relationship are developed over time between partners and if there is a need for their existence at the start of the relationship to help set a physiological baseline that supports interpersonal engagement, which may lead to greater relationship functioning as the relationship progresses (Aldao, 2013; Horn et al., 2008; Levenson & Gottman, 1983; Rick et al., 2017; Yuan et al., 2010). (Gruber-Baldini, Schaie, & Willis, 1995; Kardum, Hudek-Knezevic, Mehic, & Pilek, 2018; Leikas, Ilmarinen, Verkasalo, Vartiainen, & Lonnqvist, 2018).

Finally, although Sim\_Emotions and Sim\_Relationship were associated with higher *physiological arousal* via heart rate and EDA in sharing a positive and a negative event, these mediational effects were not supported for EDA when sharing a relationship concern and when recalling first-dates, which may be due to the difference of automatic nervous system processes captured by heart rate (activation of both parasympathetic and sympathetic) versus EDA (activation of sympathetic) providing different underlying sources of arousal (e.g., feeling calmly aroused versus nervously aroused). In addition, external factors (e.g., temperature and humidity) and internal factors (e.g., individual's hydration) are known to affect EDA measurements, which may be related to the inconsistent effects found for EDA across certain conversation topics. These findings demonstrate the limitations of solely relying on single measures and encourage prospective studies to consider mixed or multiple methods/ approaches to fully understand how partner's electrophysiological activity are associated to the quality of their relationship.

### **Limitations and Recommendations for Future Studies**

This study makes an important empirical contribution by proposing and examining the

CBR<sup>2</sup> model across multiple dimensions of interpersonal emotional processes in intercultural romantic couples. This study is also the first to collect data from self-identified intercultural romantic couples in a laboratory setting (as compared to interview based qualitative work), which is important because it allows for more accurate assessment of healthy relationship functioning across different data collection methods and cultures. Similarly, the findings of this study shed insight into the importance of effective interpersonal emotional responses across different conversation topics, which is vital to understanding how healthy relationship functioning is developed through different aspects of a relationship.

Despite these strengths this study has several limitations worth noting when interpreting findings. First and foremost, due to the cross-sectional nature of the study, the direction of effects cannot be determined, including findings from the mediation analysis. Thus, future empirical studies should broaden this exploration using longitudinal methods. It would also be of value to further examine Sim\_Emotions and Sim\_Relationship in a single culture (e.g., same-race couples), given that there may be substantial within-cultural variation that remains unexplored. Another limitation of this study is the sample size, which required me to analyze the model in smaller sub-sections, rather than testing the full model in one analysis. In the future, a larger sample will be important for comprehensive model testing. Similarly, the variance of the profile correlations representing between-partner similarity may have been limited due to the nature of intercultural couples in a Southwestern region in the U.S. Although theoretically, profile correlations can range from -1 to +1, in the present sample they were all positive. It will be important for future work to test this model in other metropolitan samples and outside the U.S. to capture greater variability in profile correlations particularly, obtaining a wider range of differences between partners in both domains. However, findings hint at the importance of

partner similarities, particularly compatibility in relationship goals between partners (i.e., Sim\_Relationship), for several interpersonal emotional processes and healthy relationship functioning.

In addition, there continues to be great need to replicate findings through quantitative methods, given that a large amount of previous studies of intercultural couples have been qualitative in nature. Moreover, future studies are encouraged to move beyond variables at the individual level and towards partner effects to better inform tailored treatment and interventions for this population. Further research in this area may help to inform clinicians about actor-partner processes that affect dyadic outcomes, as well as the specific issues and aspects of relationship functioning that remain largely unexplored in multiracial families and homosexual couples.

Lastly, future studies are encouraged to continue to assess other psychological elements of culture shared across partners that may help to explain why certain interpersonal emotional interactions and behavioral-variations of healthy relationship functioning are found in some couples but not others. For example, future studies are encouraged to consider testing whether Sim\_Emotions and Sim\_Relationship assist in predicting long-term relationship functioning in same-race couples, as well as cross-cultural ones. Overall, my findings provide new empirical support for further studying compatibility in intercultural couples and demonstrate the importance of sharing similar relationship goals between partners, which may be vital for creating successful relationships in the long-run. This is worth considering due to numerous racial-ethnic communities residing in the U.S., the increasing rate of intercultural couples and the importance of enhancing ideologies that promote cultural competence and equal-respect for cultural diversity within policy and practice.

## **Conclusion**

This study contributes to the study of culture, emotions, and romantic relationships by exploring ideas that remain underdeveloped in these fields. Using theory and dyadic data analysis I developed and conducted preliminary tests of the CBR<sup>2</sup> model. This increase in knowledge regarding the importance of couple similarity in cultural beliefs/values for interpersonal emotional processes and relationship quality contributes to current theoretical and conceptual frameworks regarding formation and development of healthy relationship functioning within-and-across cultures. Models of this nature are important because they can have an impact on policy and programs that are developed for various groups of people. It is recognized that this is a preliminary exploratory study and as such it was not able to address all formal interactions of culture and emotions in romantic relationships. Instead, the findings from this study regarding the intercultural couple experience should be explored further in future studies focusing on various (e.g., same-race) and specific forms of intercultural couples (e.g., cultural/ethnic groups) using longitudinal methods. Progress in this direction has the potential to lead to effective counseling programs meeting the needs of couples from various populations by moving beyond socially-constructed ideas of culture (e.g., race, ethnicity) and deeper into the psychological elements of culture (e.g., beliefs, values) that have greater imprint in the way we think, feel, and behave in close relationships. In conclusion, a full understanding of relationship functioning requires the contribution of cultural factors that show similar and different patterns of relationship-related interpersonal emotional processes that are used to promote healthy development in romantic relationships. Greater empirical investigation in this domain will further support what we already know and refine our understanding of the nuances of the fact that “love is universal but still culturally specific”.

Table 1. Overview of Analytic Plan

<b>Analysis</b>	<b>Path</b>	<b>Narrative Description</b>	<b>Visual Description</b>
Couple Similarity	Sim_Emotions	Profile-based partner similarity of culturally-based emotional attitudes.	Figure 1
	Sim_Relationship	Profile-based partner similarity of relationship goals.	Figure 1
Preliminary	a1	Race and ethnicity group difference for culturally-based emotional attitudes for females.	Figure 2
	a2	Race and ethnicity group difference for relationship goals for females.	Figure 2
	a3	Correlation between culturally-based emotional attitudes and relationship goals for females.	
	b1	Race and ethnicity group difference for culturally-based emotional attitudes for males.	Figure 2
	b2	Race and ethnicity group difference for relationship goals for males.	Figure 2
	b3	Correlation between culturally-based emotional attitudes and relationship goals for males.	
Main	c1	Correlation between Sim_Emotions and Sim_Relationship.	Figure 3
	d1	Dyadic regression models between Sim_Emotions and interpersonal emotional processes.	Figure 4
	e1	Dyadic regression models between Sim_Relationship and interpersonal emotional processes.	Figure 4
	d2	Dyadic regression model between Sim_Emotions and relationship quality.	Figure 5
	e2	Dyadic regression model between Sim_Relationship and relationship quality.	Figure 5
Exploratory	f1a f1b f1c'	Interpersonal emotional processes (from each of the four conversations) as a mediator between Sim_Emotions and	Figure 6

relationship quality.

g1a  
g1b  
g1c'

Interpersonal emotional processes (from each of the four conversations) as a mediator between Sim\_Relationship and relationship quality.

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Figure 7

Table 2. Demographic Statistics and Mean Estimates (N = 80).

Variables	Range	Female		Male		
		Mean (SE)	Mean (SE)	Mean (SE)	Mean (SE)	Mean (SE)
Age (Years)	20-32	23.65 (.49)	23.65 (.49)			
Relationship Length (Years)	1-10	2.81 (.29)	2.81 (.29)			
Living Together (Years)	0-4	0.90 (.20)	0.90 (.20)			
CEA	1-6	3.17 (.04)	3.16 (.04)			
RG	1-6	3.51 (.03)	3.47 (.05)			
Living Status (Frequency)	Alone 6	Friends 13	Family 14	Significant Other 34	Roommate 13	Other 0
Education Level (Frequency)	< High School 0	High School 4	Professional College 1	Some College 49	Undergraduate Degree 18	Graduate Degree 8

*Note.* No sex differences were found in demographic variables, culturally-based emotional attitudes (CEA), and relationship goals (RG).



Table 3. Descriptive Identification of Intercultural Couples (N = 80).

Intercultural Couple Identification	Female	Male	Total
Different Racial Backgrounds	3	1	4
Different Ethnic Backgrounds	4	3	7
Different Language Backgrounds	2	2	4
Different Religious Backgrounds	3	3	6
Different Racial and Ethnic Backgrounds	6	10	16
Different Racial and Language Backgrounds	0	0	0
Different Racial and Religious Backgrounds	0	0	0
Different Ethnic and Language Backgrounds	2	1	3
Different Ethnic and Religious Backgrounds	2	1	3
Different Ethnic, Language, and Religious Backgrounds	2	2	4
Different Racial, Ethnic, and Language Backgrounds	3	5	8
Different Racial, Ethnic, and Religious Backgrounds	6	5	11
Different Racial, Ethnic, Language, and Religious Backgrounds	8	6	14

Table 4. Racial and Ethnic Identification by Person (N = 80).

<b>Identity</b>	African	Asian	Caucasian	Hispanic	Native American	Native Hawaiian	Biracial	Multiracial
Racial	1	5	35	23	1	1	9	5
Ethnic	1	11	35	21	2	0	8	2

Table 5. Correlations Among Study Variables (N = 80).

Variables	1	2	3a	3b	3c	3d	4a	4b	4c	4d	5a	5b	5c	5d	6a	6b	6c	6d	7a	7b	7c	7d	8	9
1. Sim_Emotions	.	.38***	-.23*	-.04	.02	-.08	.05	-.04	.14	-.05	.03	-.04	.02	-.07	.18	.13	.07	.06	.25	.15	.07	.07	.20	.24
2. Sim_Relationship	.38***	.	.11	.32**	.27*	.16	.20*	.20*	.29*	.12*	.18	.31**	.21*	.23*	.15	.2	.18	.2	.07	.02	.09	.04	.08	.34*
3. Responsiveness																								
a. Conv. 1	-.23*	.11	.	.44***	.43***	.57***	.02	.06	-.02	.12	.35***	.3**	.1	.36***	-.03	.08	0	.02	-.15	-.13	-.12	-.20	.1	.01
b. Conv. 2	-.04	.32**	.44***	.	.56***	.41***	-.01	.11	.14	.16	.22*	.41***	.29**	.36***	.08	.1	.15	.13	-.12	-.16	-.01	-.19	.1	.12
c. Conv. 3	.02	.27*	.43***	.56***	.	.51***	-.11	.04	-.04	-.04	.24*	.35**	.25*	.17	.03	-.03	-.05	-.03	-.15	-.12	-.06	-.18	.03	.07
d. Conv. 4	-.08	.16	.57***	.41***	.51***	.	-.07	.11	.03	-.01	.22	.17	-.07	.24*	.02	-.07	-.07	-.03	-.07	-.01	-.07	-.02	.06	.04
4. Own Emotion Regulation																								
a. Conv. 1	.05	.20*	.02	-.01	-.11	-.07	.	.38**	.49**	.45**	.11	.2	.22*	.35**	.04	-.06	-.11	-.02	-.01	-.06	-.02	-.02	.23*	-.11
b. Conv. 2	-.04	.20*	.06	.11	.04	.11	.38***	.	.61***	.59***	.04	.28**	.1	.16	.17	.1	.11	.1	-.07	-.08	-.06	-.12	.13	-.13
c. Conv. 3	.14	.29*	-.02	.14	-.04	.03	.49***	.61***	.	.56***	.05	.31**	.18	.18	.11	.05	.12	.14	-.07	-.05	-.01	-.08	-.02	.08
d. Conv. 4	-.05	.12*	.12	.16	-.04	-.01	.45***	.59***	.56***	.	.01	.24*	.14	.33**	.01	-.06	.02	.02	-.07	-.06	-.11	-.11	.15	.04
5. Partner's Effectiveness																								
a. Conv. 1	.03	.18	.35***	.22*	.24*	.22*	.11	.04	.05	.01	.	.58***	.32**	.34**	.22*	.25*	.19	.18	-.13	-.06	-.06	-.01	.07	.15
b. Conv. 2	-.04	.31**	.30**	.41***	.35***	.17	.2	.28**	.31***	.24*	.58***	.	.6***	.44***	.16	.21	.15	.19	-.05	-.15	-.11	-.18	.05	.2
c. Conv. 3	.02	.21*	.10	.29**	.25*	-.07	.22*	.1	.18	.14	.32**	.6***	.	.56***	.25*	.26*	.16	.19	-.11	-.20	-.22	-.25	-.11	.26
d. Conv. 4	-.07	.23*	.36***	.36***	.17	.24*	.35***	.16	.18	.33**	.34**	.44***	.56***	.	.22	.17	.13	.18	-.02	-.23	-.21	-.21	-.02	.1
6. Heart Rate																								
a. Conv. 1	.18	.15	-.03	.08	.03	.02	.04	.17	.11	.01	.22*	.16	.25*	.22	.	.81***	.73***	.78***	.11	.04	.10	.01	-.05	-.01
b. Conv. 2	.13	.20	.08	.1	-.03	-.07	-.06	.1	.05	-.06	.25*	.21	.26**	.17	.81***	.	.86***	.88***	.02	.04	.18	.03	-.06	.06
c. Conv. 3	.07	.18	0	.15	-.05	-.07	-.11	.11	.12	.02	.19	.15	.16	.13	.73***	.86***	.	.91***	.02	.01	.09	.03	-.1	-.01
d. Conv. 4	.06	.20	.02	.13	-.03	-.03	-.02	.1	.14	.02	.18	.19	.19	.18	.78***	.88***	.91***	.	.06	.03	.10	.01	.03	-.03
7. EDA																								
a. Conv. 1	.25	.07	-.15	-.12	-.15	-.07	-.01	-.07	-.07	-.07	-.13	-.05	-.11	-.02	.11	.02	.02	.06	.	.76***	.70***	.76***	.31	.14
b. Conv. 2	.15	.02	-.13	-.16	-.12	-.01	-.06	-.08	-.05	-.06	-.06	-.15	-.20	-.23	.04	.04	.01	.03	.76***	.	.69***	.88***	.28	.14
c. Conv. 3	.07	.09	-.12	-.01	-.06	-.07	-.02	-.06	-.01	-.11	-.06	-.11	-.22	-.21	.10	.18	.09	.10	.70***	.69***	.	.76***	.18	.18
d. Conv. 4	.07	.04	-.20	-.19	-.18	-.02	-.02	-.12	-.08	-.11	-.01	-.18	-.25	-.21	.01	.03	.03	.01	.76***	.88***	.76***	.	.18	.09
8. Emotional Synchrony																								
9. Relationship Quality																								
Quality	.24	.34*	.01	.12	.07	.04	-.11	-.13	.08	.04	.15	.2	.26*	.1	-.01	.06	-.01	-.03	.14	.14	.18	.09	-.06	.

Note. Conv. = Conversation. Variables 1 and 2 are profile correlations of Sim\_Emotions and Sim\_Relationship. Variables 3-6 (a-d) are represent the average of Responsiveness, Own Emotion Regulation, and Partner Effectiveness. Variable 6 and 7 (a-d) is the mean Physiological Arousal (via Heart Rate and EDA) for each conversation. Variable 8 is an Emotional Synchrony coefficient calculated by correlating partners' change scores over 10-second average intervals for all conversations. Variable 9 is the average of the Relationship Quality scale. Significance levels in the correlation matrix include: \*p<.05, \*\*p <.01, \*\*\*p <.001.

Table 6. Path Estimates and Bootstrapped Indirect Effects for Mediation Models

Model	Path c	Path a	Path b	Path c'	a*b	95% LCI	95% UCI	99% LCI	99% UCI
<b>Sim_Emotions → Responsiveness → RQ</b>									
Conv. 1	7.89 (7.04)	-.50 (.43)	1.55 (1.89)	9.12 (7.21)	-.77 (.24)	-1.30	-.34	-1.45	-.22
Conv. 2	“”	-.69 (.54)	0.61 (1.41)	8.62 (7.16)	-.41 (.17)	-.52	.16	-	-
Conv. 3	“”	.37 (.51)	0.15 (1.43)	7.97 (7.10)	.05 (.06)	-.03	.19	-	-
Conv. 4	“”	-.41 (.47)	-0.36 (1.63)	7.60 (7.20)	.14 (.11)	-.03	.41	-	-
<b>Sim_Relationship → Responsiveness → RQ</b>									
Conv. 1	13.79** (6.01)	.51 (0.37)	.36 (1.85)	13.57** (6.14)	.18 (.17)	-.52	.62	-	-
Conv. 2	“”	1.01** (.47)	.36 (1.41)	14.01** (6.24)	.40 (.28)	1.46	.38	1.64	.21
Conv. 3	“”	1.05** (.44)	.48 (1.44)	14.10** (6.17)	.50 (.22)	1.08	.21	1.19	.08
Conv. 4	“”	.42 (.43)	1.20 (1.58)	14.51** (6.09)	.51 (.17)	0.81	.13	.88	.07
<b>Sim_Emotions → Own Emotion Regulation → RQ</b>									
Conv. 1	7.89 (7.04)	.24 (.56)	.10 (1.42)	7.89 (7.10)	.002 (.07)	-.09	.19	-	-
Conv. 2	“”	-.033 (.58)	0.30 (1.36)	7.94 (7.09)	-.009 (.07)	-.26	.04	-	-
Conv. 3	“”	.65 (.58)	.45 (1.26)	7.68 (7.15)	.28 (.18)	-.36	.37	-	-
Conv. 4	“”	-.39 (.68)	1.15 (1.01)	8.25 (7.04)	-.44 (.15)	-.85	-.27	-.93	-.18
<b>Sim_Relationship → Own Emotion Regulation → RQ</b>									
Conv. 1	13.79** (6.01)	0.23 (0.51)	-0.21 (1.40)	13.89** (6.08)	-.05 (.07)	-.14	.16	-	-
Conv. 2	“”	0.31 (0.52)	.003 (1.35)	13.79** (6.07)	.007 (.07)	-.14	.15	-	-
Conv. 3	“”	1.44 (.50)	-0.03 (1.27)	13.82** (6.26)	-.04 (.32)	-.86	.43	-	-
Conv. 4	“”	.66 (.61)	.82 (1.10)	13.17** (6.05)	.54 (.15)	.38	.98	.30	1.06
<b>Sim_Emotions → Partner's Effectiveness → RQ</b>									
Conv. 1	7.89 (7.04)	.08 (.59)	.96 (1.28)	7.96 (7.08)	.07 (.18)	-.39	.34	-	-
Conv. 2	“”	-.25 (.67)	1.56 (1.13)	9.51 (7.07)	-.39 (.25)	-.90	.24	-	-
Conv. 3	“”	.14 (.68)	1.36 (1.14)	8.20 (7.04)	.18 (.21)	-.30	.54	-	-

<i>Conv. 4</i>	“”	-.36 (.51)	1.36 (1.52)	8.52 (7.08)	-.08 (.19)	-.82	-.04	-.52	.45
Sim_Relationship → Partner's Effectiveness → RQ									
<i>Conv. 1</i>	13.79** (6.01)	.89 (.52)	.59 (1.28)	13.45** (6.14)	.52 (.22)	-.10	.78	-	-
<i>Conv. 2</i>	“”	1.65*** (.57)	.73 (1.16)	12.89* (6.37)	1.19 (0.37)	-.17	1.27	-	-
<i>Conv. 3</i>	“”	1.15* (.59)	.92 (1.15)	13.03** (6.19)	1.06 (.25)	.47	1.44	.29	1.60
<i>Conv. 4</i>	“”	1.07** (.44)	.55 (1.54)	13.40** (6.25)	.59 (.24)	-.08	.83	-	-
Sim_Emotions → Heart Rate → RQ									
<i>Conv. 1</i>	7.89 (7.04)	15.54 (10.17)	.20*** (.08)	5.47 (6.88)	3.14 (.48)	1.78	3.59	1.46	3.92
<i>Conv. 2</i>	“”	9.25 (9.03)	.23*** (.09)	5.56 (6.87)	2.12 (.54)	.51	2.63	.09	2.96
<i>Conv. 3</i>	“”	4.75 (8.72)	.28** (.09)	7.48 (6.72)	1.32 (.51)	-.06	1.94	-	-
<i>Conv. 4</i>	“”	3.26 (8.46)	.26** (.09)	7.83 (6.76)	.85 (.46)	-.35	1.34	-	-
Sim_Relationship → Heart Rate → RQ									
<i>Conv. 1</i>	13.79** (6.01)	12.51 (9.17)	.84 (.08)	11.00** (6.01)	2.30 (.39)	.96	2.31	1.07	3.12
<i>Conv. 2</i>	“”	13.90 (8.03)	.21** (.09)	11.04* (6.01)	2.92 (.46)	1.76	3.47	1.44	3.80
<i>Conv. 3</i>	“”	12.05 (7.76)	.25*** (.09)	10.89* (5.95)	3.05 (.48)	1.85	3.72	1.51	3.90
<i>Conv. 4</i>	“”	13.63 (7.48)	.22*** (.10)	10.06 (6.13)	3.01 (.43)	1.97	3.59	1.68	3.89
Sim_Emotions → EDA → RQ									
<i>Conv. 1</i>	8.08 (7.58)	17.48** (8.21)	.15 (.09)	9.79 (7.46)	.12 (.15)	.16	.10	.17	.09
<i>Conv. 2</i>	“”	8.96 (7.72)	.14 (.11)	8.17 (7.48)	0.05 (.11)	.07	.02	.08	.02
<i>Conv. 3</i>	“”	6.08 (7.73)	0.20 (.11)	7.26 (7.14)	.05 (.009)	-.09	.05	-	-
<i>Conv. 4</i>	“”	4.89 (7.47)	.09 (.11)	7.58 (7.52)	.01 (.005)	-.04	.02	-	-
Sim_Relationship → EDA → RQ									
<i>Conv. 1</i>	13.57** (6.35)	4.04 (7.79)	.14 (.09)	13.77** (6.14)	.02 (.008)	.04	.02	.05	.01
<i>Conv. 2</i>	“”	4.06 (6.99)	.21* (.11)	13.57** (5.86)	.04 (.01)	.06	.02	.07	.02
<i>Conv. 3</i>	“”	1.02 (7.07)	-.14 (.11)	13.37 (6.26)	-.005 (.007)	-.02	.01	-	-
<i>Conv. 4</i>	“”	1.87	-.09	13.31	-.07	-.02	.01	-	-

	(6.77)	(.11)	(6.28)	(.04)					
Sim_Emotions → Emotional Synchrony → RQ	7.89	.19	.72	7.76	.13	-.17	.98	-	-
	(7.04)	(.11)	(7.08)	(7.17)	(.29)				
Sim_Relationship → Emotional Synchrony → RQ	13.78**	.07	2.55	13.85**	.17	-.40	.004	-	-
	(6.01)	(.09)	(6.87)	(6.05)	(.10)				
Sim_Emotions → Sim_Relationship → RQ	8.08	.41	13.51***	13.57**	.19	.10	.19	.09	.20
	(7.58)	(.11)	(6.35)	(6.98)	(.04)				

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*Note.* Conv. = Conversation. LCI = Lower Confidence Interval; UCI = Upper Confidence Interval. EDA = Electrodermal Activity. RQ= Relationship Quality. Models that are in *italics* font indicate a mediation effect of 95 and 99 % confidence interval estimates through bootstrapping analysis. Significance levels in the correlation matrix include: \*p<.05, \*\*p <.01, \*\*\*p <.001.

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