

A cross-cultural examination of relationship quality, satisfaction, and anxiety:

Associations with self-construal and family-of-origin experiences

Ommay Aiman Safi

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and Humanities

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Ommay Aiman Safi

And have found that it is complete and satisfactory in all respects, and that any and all revisions  
required by the final examining committee have been made.

Committee Members:

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Asst. Prof. Dr. Gizem Erdem

---

Assoc. Prof. Dr. Zeynep Cemalcılar

---

Asst. Prof. Dr. Mehmet Harma

Date: \_\_\_\_\_

## STATEMENT OF AUTHORSHIP

This thesis contains no material which has been accepted for any award or any other degree or diploma in any university or other institution. It is affirmed by the candidate that, to the best of her knowledge, the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed

Ommay Aiman Safi

## ABSTRACT

The capacity to form committed romantic relationships is a key milestone in young adulthood (Rauer, Pettit, Lansford, Bates & Dodge, 2013). The goal of the present study is to explore how self-construals, formed either through culture or family-of-origin experiences, have an impact on young adults' romantic relationships and functioning. Self-construal is defined through two theories: Kağıtçıbaşı's Family Change Theory and Bowen's Family System Theory. The sample consisted of 18-25 year old urban college students recruited from the USA ( $n= 200$ ), Turkey ( $n= 196$ ), and Pakistan ( $n= 159$ ), who had been in a romantic relationship for at least three months. Findings were mixed for how the types of self-construal influenced relationship experiences and anxiety across cultures. When tested independently, both differentiation of self (DoS) and autonomy positively predicted relationship satisfaction. However, when tested simultaneously with relatedness and autonomy, only the DoS emerged as a consistent predictor of relationship satisfaction in all countries; autonomy and relatedness had a significant (positive) effect only in the USA. Anxiety was negatively associated with DoS across countries, but was not related to autonomy or relatedness. The DoS seems to operate at a more micro and intrapersonal level, whereas autonomy and relatedness seem to operate at more relational and cultural levels. This study lends support for the idea of an integrative framework to study self-construal and romantic relationships in young adulthood from a cultural-systemic perspective.

*Keywords:* romantic relationships, relationship quality, relationship satisfaction, autonomy, relatedness, culture, self-construal, family system theory, differentiation of self

## ÖZET

Genç yetişkinlikte romantik ilişki yaşama deneyimi gelişimsel olarak önemli bir aşamadır (Rauer, Pettit, Lansford, Bates & Dodge, 2013). Bu araştırmanın amacı, kültürel etkenler ile gencin kök aile ile ilişkilerinin etkisiyle oluşan gencin özbenlik algısının, romantik ilişkilerine etkisini incelemektir. Özbenlik algısı iki kuram ile tanımlanmıştır: Kağıtçıbaşı'nın Aile Değişim Kuramı ve Bowen'ın Aile Sistem Kuramı. Araştırma örneklemi, ABD ( $n = 200$ ), Türkiye ( $n = 196$ ) ve Pakistan'da ( $n = 159$ ) yaşayan, en az üç aydır devam eden bir romantik ilişkisi olan, 18-25 yaş arası, şehirli üniversite öğrencilerinden oluşmaktadır. Araştırmada, özbenlik algısı ile romantik ilişki doyumu ve kaygı arasındaki ilişkinin farklı kültürlerde işleyişi ile ilgili karışık bulgular ortaya çıkmıştır. Modelde ayrı ayrı incelendiğinde, ayrışma ve özerklik arttıkça ilişki doyumunun arttığı görülmüştür. Öte yandan, ayrışma, özerklik ve ilişkisellik aynı modelde birlikte test edildiğinde ise ayrışmanın her üç kültürde ilişki doyumunu yordadığı görülmüştür. Buna ek olarak Amerikan örnekleminde, özerk-ilişkisellik arttıkça ilişki doyumunun arttığı, Pakistan ve Türk örneklerinde ise böyle bir ilişki olmadığı bulunmuştur. . Kaygı ise her üç kültürde de ayrışma ile negatif koreledir, fakat özerk-ilişkisellik ile istatistiksel olarak ilişkili değildir. Bulgular, ayrışma olgusunun daha kişisel ve psikik bir süreç olduğunu, özerk-ilişkiselliğin ise daha ilişkisel ve kültürel olduğunu göstermektedir. Bu çalışma genç erişkinlik döneminde özbenlik algısı ile romantik ilişkileri incelemek üzere kültürel ve sistemik yaklaşımların daha bütüncül bir çerçevede araştırılması fikrini desteklemektedir.

*Anahtar Kelimeler:* romantik ilişkiler, ilişki kalitesi, ilişki doyumu, özerklik, ilişkisellik, kültür, özbenlik algısı, aile sistem kuramı, ayrışma

## DEDICATION

*To Ammi and Papa.*

*I would not be here without your love, support and encouragement.*



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# CHAPTER 1

## INTRODUCTION

The quality of one's romantic relationships has been documented to have an impact on one's physical and mental health (Braithwaite, Delevi, & Fincham, 2010; Selcuk, Gunaydin, Ong, & Almeida, 2016; Selcuk & Ong, 2013). Specifically, being in a committed romantic relationship has been associated with fewer health problems, such as lower cardiovascular reactivity during conflict in the relationship (Robles, Slatcher, Trombello & McGinn, 2014), steeper diurnal cortisol slopes (an indicator of better health; Slatcher, Selcuk & Oong, 2015), lower obesity rates (Braithwaite, Delevi, & Fincham, 2010; Selcuk & Ong, 2013), as well as fewer mental health problems, including a reduced risk of substance abuse and fewer sexual risk taking behaviours (Braithwaite, Delevi, & Fincham, 2010). Studies with young adults also suggest that those in fulfilling romantic relationships report higher levels of overall happiness and life satisfaction (Demir, 2008; Selcuk, Gunaydin, Ong, & Almeida, 2016). Given these findings, it seems evident there is a need to explore the factors which affect romantic relationship quality and satisfaction among young adults.

Recent trends in the USA show that many emerging adults take their time getting involved in committed relationships and prefer marrying at later ages (Martin, Astone, & Peters, 2014; United Nations Department of Economic and Social Affairs, 2015; Willoughby & Carroll, 2015). This trend also seems to be evident in developing countries such as Turkey (Türkiye İstatistik Kurumu, 2017) and Pakistan (National Institute of Population Studies [Pakistan] & ICF International, 2013). Yet little is known about the ways in which romantic relationships during young adulthood differ across cultures (see Dion & Dion, 1993; Goodwin, 2013 for exceptions). This is especially salient considering the scarcity of research concerning romantic relationships

in developing countries like Turkey (Güney, 2011) and Pakistan. Most research with Pakistani populations, for example, revolves around married couples (Ayub & Iqbal, 2012; Qadir, de Silva, Prince & Khan, 2005) as pre-marital relationships are frowned upon in Pakistan and other Asian countries (Kim & Ward, 2007). Thus, we employed a cross-cultural approach with participants from the USA, Turkey and Pakistan in order to investigate the factors that affect romantic relationship experiences of emerging adults according to the theoretical concepts of Family Change Theory (Kağıtçıbaşı, 2007) and Family Systems Theory (Bowen, 1974). We aim to offer a richer understanding of romantic relationships and patterns. Such findings may offer valuable insight for future research within non-Western populations and developing countries.

### **1.1. Bowen's Family Systems Theory (BFST) and Differentiation of Self**

Bowen's (1974) Family Systems Theory (BFST) is a major theoretical perspective in couples and family therapy. Bowen provides an intergenerational and systemic approach in conceptualising relational (e.g., conflict, infidelity) and individual symptoms (e.g., psychiatric disorders) within the context of family dynamics, roles, boundaries, and triangles. Bowen (1974; 1993) argues that the perception of closeness or distance in a relationship is an anxiety-inducing factor. The ways in which family members deal with emotional closeness versus distancing indicates their level of adaptability as a family and their mental well-being as individuals. According to Bowen's theory, family members and romantic partners are always regulating distance with one another (i.e., they get closer or more distant at various times) depending on their emotional needs. While a healthy balance of separateness and connectedness between family members and partners is desirable, fusion (extreme connectedness) and cut-off (extreme separateness) typically indicate high levels of anxiety in the system, which ultimately manifests itself in family dysfunction or individual symptoms. Additionally, being too close (fused) or too

distant (cut-off) from the family system may be a threat to one's sense of independence, while the latter gives rise to fears of isolation, abandonment, and rejection (Benson, Larson, Wilson & Demo, 1993). When a stressor threatens the equilibrium of a relationship system, family members and partners can react in different ways. One of the predictors of how a person may react to such a change is the concept of *differentiation of self*.

Differentiation of self (DoS) is defined as the capacity of an individual to exert their own autonomy whilst still maintaining an emotional connection to the relationship system (Brown, 1999). On an intrapersonal level, this refers to the person being able to differentiate between emotional, or 'feeling', processes and intellectual ones, thereby being able to soothe one's own anxiety but also be less reactive to or overwhelmed by the anxiety of others. The DoS also refers to the ability to maintain intimacy with others and simultaneously assert one's own independence (Benson et al., 1993). An individual's pattern of relating to others is hypothesised to be identical to the patterns of relationships in the family in which the person grew up (family-of-origin). Parents behave in certain ways according to their own differentiation of self; this is passed down to the child and can manifest in either similar, higher or lower levels of differentiation, depending on the parent's level of DoS and the anxiety the family faces (Goldenberg & Goldenberg, 2013). Hence, the DoS of a person gives us an idea of their emotional reactivity, as well as indicating the emotional patterns of the family to which they belong (Bowen, 1993). Levels of DoS range from low to high. A low DoS level indicates high levels of emotional interdependency on others and an emotional fusion into a common self with others as there is no distinction between feeling and thought, thus making the person dominated by the feelings of the people around them. A high DoS level is indicative of emotional maturity as the person is able to maintain intellectual functioning even in stressful periods and is more certain of who they are

and what they believe, thus making them able to make decisions independent of external pressures and any emotional turmoil around them (Goldenberg & Goldenberg, 2013)

According to Bowen, differentiation is a necessary part of developing healthy relationships, both within and outside the family system (Bowen, 1978 in Ng & Smith, 2006). Being fused, or non-differentiated, is seen as a cause for worry according to this theory; low DoS levels are thought to be pathological whereas individuation is seen as the complete opposite. By being able to balance one's individuality and closeness with others, regulating emotion whilst maintaining rational thought, one can interact better with others; the individual is able to react to stresses in his/her relationships with more of a problem-solving approach, as opposed to letting their own feelings get the best of them (Ng & Smith, 2006). Ergo, those with lower levels of DoS would have more emotional reactions to stress, exhibit more anxiety and generally have poorer mental health (Harvey & Bray, 1991). On the other hand, higher levels of DoS are expected to contribute to psychological well-being and interpersonal competence (Skowron, Stanley & Shapiro, 2009). Research demonstrates that DoS is associated with life satisfaction and relationship stability, and fewer interpersonal problems (Skowron, Holmes, & Sabatelli, 2003; Skowron, Stanley & Shapiro, 2009).

### **1.1.1. Differentiation of self and anxiety.**

Findings from family science research support the idea that lower levels of differentiation predict psychological distress (Bartle-Haring & Probst, 2004; Krycak, Murdock & Marszalek, 2012; Skowron, Stanley & Shapiro, 2009), mental health issues like anxiety, depression, somatisation and obsessive-compulsive symptoms (Bartle-Haring, Rosen, & Stith, 2002), and perceived stress (Murdock & Gore, 2004). Specifically, low DoS levels have been linked to higher physiological symptoms of anxiety (Peleg & Rahal, 2012), and state and trait anxiety

(Xue et al., 2016). Differentiation is also associated with social anxiety in college students (Peleg & Zoabi, 2014). Anxiety inventories have also been used to establish construct validity of scales meant to assess differentiation of self and have similarly found that differentiation has a negative association with anxiety (Haber, 1993; Skowron & Friedlander, 1998; Drake, Murdock, Marszalek & Barber, 2015). Considering this, anxiety serves to be a useful measure when analyzing BFST concepts, especially when assessing the intrapersonal correlates of differentiation of self.

### **1.1.2. Differentiation of self and romantic relationships.**

Bowen (1993) argues that within interpersonal relationships, the greatest emotional intensity would occur within romantic relationships because they mimic family-of-origin relationships as well as prior romantic relationships. Maintaining emotional closeness with a partner whilst still retaining one's ability to be an individual becomes difficult, especially when an individual has low levels of DoS. Non-marital romantic relationships fall into the category of romantic relationships, and their participants also seek emotional intimacy. Therefore, we may assume that Bowen's assumptions regarding relationships apply to these relationships as well.

Skowron (2000) investigated the impact of differentiation of self upon marital satisfaction, testing Bowen's idea that a higher DoS level leads to better interpersonal functioning, especially in romantic relationships. Analyses showed that higher levels of DoS predicted greater marital adjustment for both husbands and wives. Results of another study (Gubbins, Perosa, & Bartle-Haring, 2010) indicated a significant positive relationship between participants' marital adjustment and their emotional reactivity to their parents. Given that emotional reactivity is component of the DoS and that emotional patterns are transmitted from



the family-of-origin to other relationships, we can conclude that these results support the findings from Skowron's earlier work (2000).

Similar studies have examined the concept of DoS on dyadic adjustment and couple satisfaction utilising Italian (Lampis, 2016), Israeli (Peleg, 2008), Portuguese (Ferreira, Narciso, Novo & Pereira, 2014), and Spanish samples (Rodríguez-González, Skowron, Cagigal de Gregorio, & Muñoz San Roque, 2016). These studies suggested that the positive relationship between the DoS and marital quality was not limited to American samples. However there were gender differences in the association of marital quality with the DoS, mainly that emotional cut-off was only predictive of adjustment in women, but not men.

Timm & Keiley (2011) tested a path model for attachment, sexual communication, the DoS and marital satisfaction and found significant positive associations between higher levels of DoS and marital satisfaction. Similar results were found by Holman & Busby (2011) whilst examining the contribution of family-of-origin experiences and actor-partner effects on relationship quality. Contrary to these studies, research conducted by Patrick, Sells, Giordano, and Tollerud (2007) indicated that there was no relationship between marital satisfaction and differentiation of self.

The BFST, while being widely utilised in the field of family science, does have its share of criticisms. Though the theory is intended to be a universal, intergenerational, and systemic theory, feminist theorists (e.g., Knudson-Martin, 1994) claim it is biased against women. Research suggests that women tend to develop a connected sense of self, and they define themselves on the basis of their attachments with others (Chodorow, 1978 in Westcott, 1989). Further, while making moral judgements, women try to understand others' frames of reference, often making judgements that take into account the needs of everyone around them, as opposed

to referring to a categorical moral principle (Knudson-Martin, 1994). Thus, according to Bowen's definition, women would automatically be classed as having a lower level of differentiation of self.

Similarly, the BFST does not appear to be as culturally sensitive as it claims to be. Bowen's theory reflects values that are characteristic to Western, individualistic cultures (Kağıtçıbaşı, 2007) where it is a norm to become independent and achieve autonomy (Gushue & Constantine, 2003). However, cultures exist where connectedness is valued more than individualism (Kağıtçıbaşı, 2007). Studies investigating family-of-origin experiences on differentiation of self in collectivistic societies found that individualistic participants are ranked higher in differentiation than their collectivist counterparts (Chung & Gale, 2006), and country-of-origin explained more of the variance in scores on the Differentiation of Self Inventory than did family-of-origin (Chung & Gale, 2009). Similarly, the Chinese version of the Differentiation of Self Inventory shows a factor structure that is dissimilar to the original (five subscales), suggesting the items indicate a different meaning for differentiation in other cultures (Lam & Chan-So, 2015). Such findings suggest psychological phenomena and family interactions are associated with a cultural dimension of individualism and collectivism (Triandis, 1989, in Chung & Gale, 2009), and that differentiation inventories may only be measuring aspects of individualism rather than a balance of autonomy and connectedness.

## **1.2. The Autonomous-Related Self and Culture**

Contrary to Bowen (1974), Kağıtçıbaşı (2005) argues that self-construal develops in the family system as a function of the larger cultural context, rather than being based solely on intergenerational relationships. According to Kağıtçıbaşı (2005), autonomy and relatedness are two basic needs that can co-exist within an individual. Autonomy refers to 'the state of being a

self-governing agent’, and relatedness refers to ‘the degree of connection with others’. These two dimensions of agency and interpersonal distance underlie the self, the relations of self with others, and behaviour (Kağıtçıbaşı, 2005). According to Kağıtçıbaşı’s (2007) family change theory (FCT), there are different types of family models situated within socioeconomic and cultural contexts that are related to different types of child rearing patterns, which in turn engender the development of different types of self-construal within a child. These self-construals are based on the two dimensions of autonomy and relatedness, the combination of which leads to four distinct types of self (Figure 1).

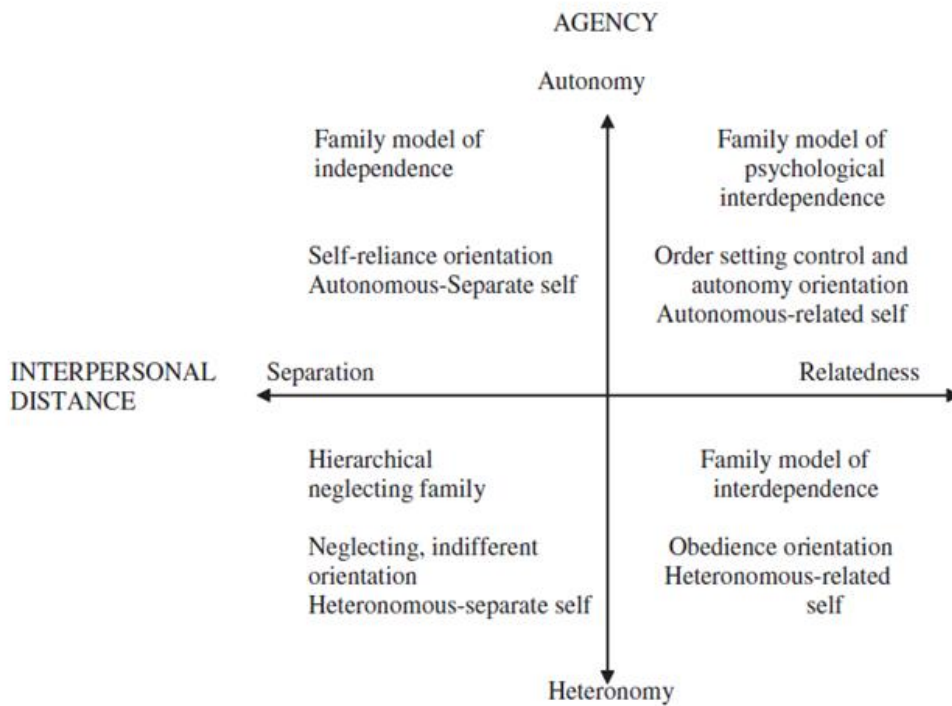


Figure 1. Family Change Theory and autonomy-relatedness. Adapted from Autonomy and Relatedness in Cultural Context. Implications for Self and Family by C. Kağıtçıbaşı, 2005, *Journal of Cross-Cultural Psychology*, 36, p.412.

The autonomous-separate self is high on autonomy and low on relatedness and is a product of the promotion of self-reliance orientation in child rearing and permissive parenting. This sort of self is found within the *family model of independence*, which is often situated in affluent, urbanised, and industrialised societies that are characterised by a culture of separateness (i.e., individualistic cultures).

The development of the heteronomous-related self, characterised by low agency and high interpersonal distance, is engendered by authoritarian parenting with obedience orientations in child rearing. Such parenting is characteristic of the *family model of interdependence*, which is usually found in agrarian and close-knit societies that are situated within cultures of relatedness (i.e., collectivistic cultures).

The *family model of emotional-interdependence* is a synthesis of the previous two models and is characterised by authoritative parenting that allows the child to develop an autonomous-related self and enables the child have a sense of both agency and closeness to others. This model is found often in countries that are undergoing economic growth. This economic growth allows for the lessening of financial intergenerational dependencies on children, while allowing for the retention of a close-knit structure of self-other relationships.

The last type of self, the heteronomous-separate self, is developed in a hierarchical neglectful family that is indifferent to child-rearing. This type of self has very little agency and low interpersonal distance with others. The family patterns suggested by family change theory have been studied in a number of different countries and the evidence indicates that such family models and respective self-construals exist in their hypothesised cultures (Mayer, 2013). Specifically, a study by Mayer, Trommsdorff, Kağıtçıbaşı & Mishra (2012) revealed that family models of independence were found in Germany (a culture characterised by high individualism);

family models of interdependence were found in India (a culture characterised by high collectivism); and a family model of emotional interdependence was found in Turkish participants (a culture that gives importance to both individualism and collectivism).

Research which aims to apply the concepts of the FCT should ideally investigate it in all three different types of cultures, hence we investigated our hypotheses in a culture of separateness (USA), a culture of relatedness (Pakistan) and a culture that promotes a family model of emotional interdependence (Turkey). Turkey has exhibited family models of emotional interdependence (Mayer et al., 2012), while the USA exhibits family models of independence (Aycicegi-Dinn & Kağıtçıbaşı, 2010 in Mayer, 2013). We consider Pakistan a culture of relatedness that exhibits family models of interdependence due to its cultural similarities with India, which is another collectivistic culture (Hofstede, 1983). Pakistani families display high parental control, obedience-oriented socialisation and emphasise conformity (Stewart et al., 1999), all of which are characteristics that are common to interdependent families.

### **1.2.1. Autonomous-related self and anxiety.**

The autonomous-related self is considered to be the most psychologically sound type of self, as it meets the two basic needs of autonomy and relatedness, unlike the other types which are missing either one or both of the needs (Kağıtçıbaşı, 2007). Research demonstrates that having these basic needs met is associated with well-being (Reis, Sheldon, Gable, Roscoe & Ryan, 2000). Having both needs supported is associated with better mental health, indicated by lower levels of depressive symptoms, anxiety, and somatisation (Ryan, Patrick, Deci, & Williams, 2008). Specifically, research shows that parent-adolescent interactions characterised by autonomy- and relatedness-promoting behaviours protect adolescents against the harmful

effects of stressful life events, which may include somatic complaints, depressive symptoms and anxiety issues (Willemen, Scheungel, & Koot, 2010).

In a test of a cultural model of vulnerability to distress, interdependent self-construals increased the likelihood of having a sociotropic cognitive style (characterised by catastrophizing the prospects of losing connections with others and developing a fear of being excluded from an in-group), which was then associated with higher levels of anxiety. Anxiety also mediated the effect of sociotropy on depression (Mak, Law, & Teng, 2010). Results indicated that while interdependent self-construals made a person more vulnerable to developing sociotropy, the construal itself was negatively related to depression, implying that maintaining bonds with others were adaptive for individuals with interdependent self-construals (Mak, Law, & Teng, 2010). The findings indicate that independent self-construals are negatively associated with depression and anxiety (Mak, Law, & Teng, 2010) and signify that a balance of both autonomy and connectedness are needed to maintain psychological health.

### **1.2.2. The autonomous-related self and romantic relationships.**

Research suggests that fulfilment of the needs of autonomy and relatedness is associated with better psychological well-being in a number of domains and social settings, including education, parenting, exercise, sports, work, and close relationships (Deci & Ryan, 2008). The evidence indicates that autonomy and relatedness are also key factors for marital relationships. Dana Vannoy (1999) proposed that stable marriages are more likely to be achieved if the individuals in them develop their capacity for both intimacy and autonomy. The fulfilment of both autonomy and relatedness is linked to higher levels of marital relationship satisfaction amongst couples (Patrick, Knee, Canevello & Lonsbary, 2007; Rankin Esquer, Burnett, Baucom, and Epstein, 1997; Zimmer-Gembeck, Arnhold & Connolly, 2014). Celenk, van de Vijver, and

Goodwin (2011) also found that autonomy-relatedness was associated with high levels of relationship satisfaction among both British and Turkish couples, highlighting that this phenomenon was seen in two distinct types of cultures (independent and emotionally-interdependent, respectively).

A longitudinal study by Scharf and Mayseless (2008) showed that parents granting autonomy to adolescent girls and maintaining close relationships with them was associated with not only the girls having good relationships with their parents, but also higher quality romantic relationships later in adulthood, thus underscoring the importance of autonomy and relatedness for close relationships. We assume that this type of upbringing helped develop an autonomous-related self in the girls, which is then related to having a better quality of romantic relationship later on in life.

### **1.3. Bowen's Family Systems Theory and Family Change Theory**

In sum, there are two different types of theories to conceptualise the potential relationship between self-construal, relationship quality, and anxiety: Bowen's family systems theory, which is a clinical theory of individual functioning within the family system across generations; and Kağıtçıbaşı's family change theory, which is a theory of self-construal in the context of parenting and culture. However some similarities emerge between the two perspectives. Namely, both emphasise the need for autonomy and emotional closeness for healthy functioning. On the other hand, these theories are contrary to one another in the ways in which they define healthy vs. dysfunctional levels of closeness for the individual. According to Bowen, fusion (the extreme form of closeness) indicates low differentiation of self, which is dysfunctional for the family system and anxiety-inducing for individuals. However, Kağıtçıbaşı (2007) warns against

generalising a separate type of self (which is akin to a highly differentiated self) as the *only* healthy prototype.

We argue that the definition of ‘fusion’ is culturally-dependent and context specific. Patterns of closeness can be functional, healthy, and even desirable in certain cultures. For instance, what is termed ‘fusion’ is a pattern that can be observed in cultures of relatedness – one that is accepted and even encouraged (Kağıtçıbaşı, 2007).

Even though research suggests that the BFST concepts seem to be applicable to a variety of cultures (Lampis, 2016; Peleg, 2008; Rodríguez-González et al., 2016), a study by Chung and Gale (2009) signalled that in comparison to the American sample, the associations between family functioning and the DoS in the Korean sample were much weaker. The results also indicated that the country variable influenced the DoS more strongly than the family functioning variable. Similarly, family enmeshment (a concept similar to fusion) did not have any effect on anxiety or depression in Italian adolescents (Manzi, Vignoles and Scabini 2006), again suggesting that fusion may not be maladaptive. Indeed, these mixed findings have led to a call to study the meaning of differentiation in different contexts, considering culture-specific definitions of the DoS along with the concepts of universal cultural dimensions as postulated by Kağıtçıbaşı’s (2007) family change theory in an integrative way.

#### **1.4. Current Study**

The current study builds on our theoretical critique of BFST and its individualistic assumptions regarding romantic relationships and anxiety (Erdem & Safi, in press). We argue that the FCT offers a new way of examining romantic relationship quality and satisfaction in the context of culture. Contrary to Bowen, we would not expect extreme forms of intimacy to trigger



anxiety or relationship dissatisfaction. Rather, such relationships would vary across cultures depending on levels of autonomy and relatedness.

Specifically, the current study aimed to cross-culturally explore how self-construal, defined through Bowen family systems theory (BFST) vs. family change theory (FCT), is associated with non-marital romantic relationship quality, satisfaction, and anxiety among dating young adults. The hypothesised model is shown in Figure 2. Independent variables consisted of differentiation of self, autonomy, and relatedness, while dependent variables included state anxiety, relationship quality, and level of relationship satisfaction with current partner.

Hypotheses are as follows:

*Hypothesis 1.1:* Differentiation of self (DoS) is positively associated with romantic relationship quality and satisfaction.

*Hypothesis 1.2:* The level of association between the DoS and romantic relationship quality and satisfaction will vary across cultures (USA, Turkey, and Pakistan). The magnitude of the association of the DoS with relationship quality and satisfaction will be higher in the USA (culture of separateness) than in Turkey (culture of emotional interdependence), and Pakistan (culture of relatedness).

*Hypothesis 2.1:* The DoS is negatively associated with anxiety levels of dating individuals.

*Hypothesis 2.2:* The magnitude of the relationship between the DoS and anxiety will be lower in Turkey and Pakistan, but higher in the USA.

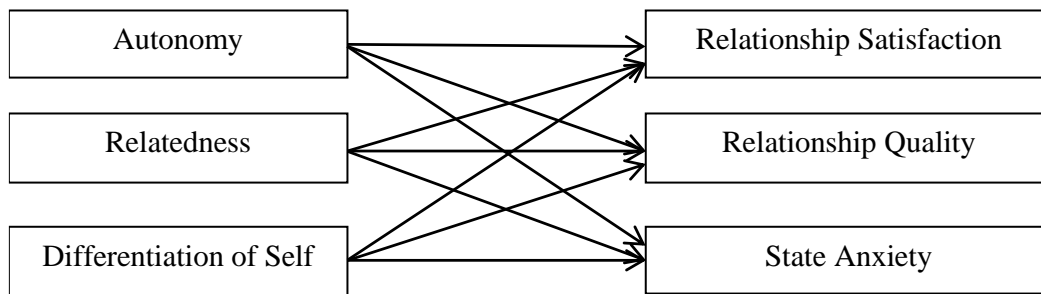
*Hypothesis 3.1:* Autonomy and relatedness are positively associated with relationship quality and satisfaction.

*Hypotheses 3.2:* The associations between autonomy and relatedness and relationship quality and will be higher in Turkey (culture of emotional interdependence) and Pakistan (culture of relatedness) as compared to the USA (culture of separateness).

*Hypothesis 4.1:* Autonomy and relatedness are not associated with state anxiety.

*Hypothesis 4.2:* The lack of association between anxiety and autonomy relatedness is consistent across cultures.

*Hypothesis 5:* Autonomy and relatedness and the DoS are distinctive constructs in cultures of relatedness (Pakistan) and cultures of emotional interdependence (Turkey), therefore they are not significantly correlated. In cultures of separateness (USA), high autonomy is associated with high DoS.



*Figure 2.* Hypothesized model

## CHAPTER 2

### METHOD

#### 2.1. Participants and Procedure

The total sample included 555 participants, recruited from the USA ( $n = 200$ ), Turkey ( $n = 196$ ), and Pakistan ( $n = 159$ ). Participants were 18 to 25 year old university students who reported themselves to have been involved in an exclusive heterosexual romantic relationship for at least the past three months. Individuals who were currently engaged, married and/or not enrolled in college were excluded from the study.

Characteristics of the sample by country are presented in Table 1. The participants were 21.99 years old ( $SD = 1.93$ ) on average. The majority of the sample were female (62.7%,  $n = 348$ ) and had a household income above the poverty line (65.9%,  $n = 366$ ). Participants generally identified with the majority ethnicity with 63% White, non-Hispanic in the USA, 87.2% Turkish in Turkey, and 69.2% Punjabi in Pakistan. More than half of the participants were enrolled in private universities (57.1%,  $n = 317$ ). The average length of relationship was 20.72 months ( $SD = 17.98$ ), with relationships ranging from 3 to 84 months. In addition, 36.9% ( $n = 205$ ) reported being in a long-distance relationship.

Several differences were found in participants' demographic characteristics across the three countries. Participants in the Pakistan sample were significantly older [ $F(2, 551) = 10.25$ ,  $p = .000$ ] and more likely to be in graduate school [ $\chi^2(10) = 46.72$ ,  $p = .001$ ] than participants in Turkey and the USA. The Turkish sample included a significantly higher proportion of female respondents [ $\chi^2(2) = 13.70$ ,  $p = .000$ ] and fewer ethnic minorities [ $\chi^2(2) = 31.72$ ,  $p = .000$ ] than

Table 1.

*Demographics for all countries*

|                         | Total<br><i>N</i> = 555               | USA<br><i>N</i> = 200                 | Turkey<br><i>N</i> = 196              | Pakistan<br><i>N</i> = 159            |
|-------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Demographics            | Mean ( <i>SD</i> )<br>or <i>n</i> (%) | Mean ( <i>SD</i> )<br>or <i>n</i> (%) | Mean ( <i>SD</i> )<br>or <i>n</i> (%) | Mean ( <i>SD</i> )<br>or <i>n</i> (%) |
| Age (years)             | 21.99<br>(1.93)                       | 22 (1.89) <sup>c</sup>                | 21.58<br>(1.95) <sup>c</sup>          | 22.49<br>(1.83) <sup>a,b</sup>        |
| Gender                  |                                       |                                       |                                       |                                       |
| Male                    | 207<br>(37.3%)                        | 87 (43.5%) <sup>b</sup>               | 53 (27%)<br><sub>a,c</sub>            | 67 (42.1%)<br><sub>b</sub>            |
| Female                  | 348<br>(62.7%)                        | 113 (56.5%) <sup>b</sup>              | 143 (73%)<br><sub>a,c</sub>           | 92 (57.9%)<br><sub>b</sub>            |
| Ethnicity               |                                       |                                       |                                       |                                       |
| Majority                |                                       | 126 (63%)                             | 171<br>(87.2%)                        | 110<br>(69.2%)                        |
| Minority*               |                                       | 74 (37%)                              | 25<br>(12.8%)                         | 49 (30.8%)                            |
| Income                  |                                       |                                       |                                       |                                       |
| Below Poverty<br>Line   | 135<br>(24.3%)                        | 35 (17.5%)                            | 97<br>(49.5%)                         | 3 (1.9%)                              |
| Above Poverty<br>Line** | 366<br>(65.9%)                        | 158 (79%)                             | 76<br>(38.8%)                         | 132 (83%)                             |
| Chose not to<br>answer  | 54 (9.7%)                             | 7 (3.5%)                              | 23<br>(11.7%)                         | 24 (15.1%)                            |
| Education Level         |                                       |                                       |                                       |                                       |
| Freshman                | 74<br>(13.3%)                         | 21 (10.5%)                            | 41<br>(20.9%) <sup>a,c</sup>          | 12 (7.5%)                             |
| Sophomore               | 107<br>(19.3%)                        | 55 (27.5%) <sup>b,c</sup>             | 31<br>(15.8%)                         | 21 (13.2%)                            |
| Junior                  | 104<br>(18.7%)                        | 39 (19.5%)                            | 39<br>(19.9%)                         | 26 (16.4%)                            |
| Senior                  | 163<br>(29.4%)                        | 58 (29%)                              | 57<br>(29.1%)                         | 48 (30.2%)                            |
| Graduate<br>(Masters)   | 97<br>(17.5%)                         | 24 (12%)                              | 26<br>(13.3%)                         | 47 (29.6%)<br><sub>a,b</sub>          |
| Graduate (PhD)          | 10 (1.8%)                             | 3 (1.5%)                              | 2 (1%)                                | 5 (3.1%)                              |
| University Type         |                                       |                                       |                                       |                                       |
| Public                  | 225<br>(40.5%)                        | 127 (63.5%) <sup>b,c</sup>            | 56<br>(28.6%)                         | 41 (25.8%)                            |
| Private                 | 317<br>(57.1%)                        | 72 (36%)                              | 138<br>(70.4%) <sup>a</sup>           | 107<br>(67.3%) <sup>a</sup>           |
| Other                   | 13 (2.3%)                             | 1 (0.5%)                              | 2 (1%)                                | 11 (6.9%) <sup>b</sup>                |

|                              | Total<br>N = 555      | USA<br>N = 200            | Turkey<br>N = 196            | Pakistan<br>N = 159           |
|------------------------------|-----------------------|---------------------------|------------------------------|-------------------------------|
| Demographics                 | Mean (SD)<br>or n (%) | Mean (SD)<br>or n (%)     | Mean (SD)<br>or n (%)        | Mean (SD)<br>or n (%)         |
| Major                        |                       |                           |                              |                               |
| Sciences                     | 124<br>(22.3%)        | 63 (32%) <sup>b</sup>     | 19 (9.8%)                    | 42 (26.4%) <sup>b</sup>       |
| Social Sciences/Arts         | 202<br>(36.4%)        | 72 (36.5%)                | 87<br>(44.8%) <sup>c</sup>   | 43 (27%)                      |
| Business                     | 125<br>(22.5%)        | 34 (17.3%)                | 42<br>(21.6%)                | 49 (30.8%) <sup>a</sup>       |
| Engineering                  | 48 (8.6%)             | 13 (6.6%)                 | 29<br>(14.9%) <sup>a,c</sup> | 6 (3.8%)                      |
| Medical/Nursing              | 37 (6.7%)             | 11 (5.6%)                 | 12 (6.2%)                    | 14 (8.8%)                     |
| Other                        | 8 (1.4%)              | 3 (1.5%)                  | 4 (2.1%)                     | 1 (0.6%)                      |
| Undeclared                   | 3 (0.5%)              | 1 (0.5%)                  | 1 (0.5%)                     | 1 (0.6%)                      |
| Relationship Length (Months) | 20.72<br>(17.98)      | 19.05 (15.44)             | 21.31<br>(19.42)             | 22.39<br>(18.75)              |
| Long-distance relationship   |                       |                           |                              |                               |
| No                           | 224<br>(40.4%)        | 99 (49.5%) <sup>b,c</sup> | 113<br>(57.7%)               | 94 (59.1%) <sup>b</sup>       |
| Yes                          | 205<br>(36.9%)        | 27 (13.5%)                | 31<br>(15.8%) <sup>a,c</sup> | 65 (40.9%) <sup>a</sup>       |
| Length of LDR (Months)       | 8.39<br>(12.03)       | 4.52 (8.99) <sup>b</sup>  | 5.93 (9.35) <sup>b</sup>     | 14.41<br>(13.96) <sup>a</sup> |
| Commitment                   | 6.05 (1.29)           | 6.31 (1.04) <sup>a</sup>  | 5.97 (1.24) <sup>b</sup>     | 5.84 (1.57) <sup>b</sup>      |

*Note.* Subscript in cells denotes a significant difference amongst groups at the .05 level: a = significantly different from the American group, b = significantly different from the Turkish group, c = significantly different from the Pakistani group.

\* The Majority ethnicities for the USA, Turkey and Pakistan were White, Turk and Punjabi respectively. Minority ethnicities in the USA included participants who were American Indian/Alaska Native, Asian or Asian American, Black or African American Hispanic (non-white), and of mixed ethnicity. In Turkey minority ethnicities included Bosniak, Albanian, Kurd, Zaza, Georgian Circassian, Pomak, Arab, Laz, Armenian, Jewish, and Greek participants. In Pakistan the minority ethnicities comprised of participants who were Pashtun, Sindhi, Balochi and Mohajir.

\*\* Poverty line refers to an annual income of less than \$15,000 in the USA, a monthly income less than 1500 lira in Turkey, and a monthly income of less than 5000 rupees in Pakistan.

its counterparts. Finally, participants in the USA sample were significantly more likely to be enrolled in a public university [ $\chi^2(4) = 87.54, p = .000$ ].

## 2.2. Measures

The survey instrument included measures of relationship quality and satisfaction, self-construal, differentiation of self, and anxiety. Efforts were made to find local, validated versions of the measures utilised. Where necessary, the original measures were translated and back-translated by native speakers/or professional translators into Turkish (for the Turkish sample) or Urdu (for the Pakistani sample).

*Demographics Form.* This form included basic socio-demographic information of the participants, with questions pertaining to gender, age, ethnicity, socioeconomic status, and educational level.

*Relationship Questionnaire.* This form was used to gather information about the current romantic relationship of respondents and included questions about the gender of the partner (male vs. female), the duration of the relationship (in months), perceived commitment of the respondent, and whether or not the participant was in a long-distance relationship.

*Autonomy and Relatedness Scales (A-R).* The A-R scales were used to investigate self-construal as individual-level reflections of culture (Kağıtçıbaşı, Baydar, Cemalcılar & Aydınli-Karakulak, 2016). The measure was originally developed both in English and Turkish and consisted of two scales, each with ten items to reflect a person's sense of agency (autonomy) and the connectedness of the self to others (relatedness). Both scales were presented on a 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*) and had items like 'I make my own decisions' (autonomy scale) and 'What makes people close to me happy makes me

happy too' (relatedness scale). The measure has shown good construct and predictive validity as well as high internal reliability (Autonomy,  $\alpha = .90$ ; Relatedness,  $\alpha = .89$ ) (Kağıtçıbaşı et al., 2016). The Cronbach alphas for the Autonomy scale ranged from .79 to .88, and the alphas for the Relatedness scale ranged from .81 to .88 across countries in the current study.

*Differentiation of Self Inventory-Short Form (DSI-SF)*. The scale was originally developed by Skowron and Friedlander (1998) and revised by Drake and colleagues (2015). The revised 20 item version measures the ability of an individual to balance the opposing pulls of expressing individuality and togetherness within relationship systems, while retaining the ability to think rationally in emotional situations (Drake et al., 2015). Responses are measured on a 6-point Likert scale ranging from 1 (*not at all characteristic of me*) to 6 (*very characteristic of me*). Sample items include: '*At times, I feel as if I'm riding an emotional roller-coaster*' and '*No matter what happens in my life, I know that I'll never lose my sense of who I am*'. The DSI-SF has an internal consistency of .89, with its subscale alphas ranging from .72 to .84 (Drake et al., 2015). A validated Turkish version was used in the current study (Işık & Bulduk, 2015), while a translation of the DSI-SF in Urdu was used for Pakistan. In the present study, the DSI-SF demonstrated high reliability, with an estimated Cronbach alpha of .90 in the USA, .83 in Pakistan, and .75 in Turkey.

*Kansas Marital Satisfaction Scale (KMS)*. The three item measure assesses the satisfaction one feels with a romantic partner or a spouse (Schumm, Nichols, Schectman, & Grigsby, 1983). The KMS items are rated on a 7-point Likert scale (1= *extreme dissatisfaction* and 7= *extreme satisfaction*). The scale has been demonstrated to have a high internal reliability (Cronbach alpha=.98; Graham, Diebels & Barnow, 2011; Schumm et al., 1983) and good construct validity (Schumm, Rosemary, Likcani, Akagi & Bosch, 2008). For the purposes of this

study, the scale was adapted to Turkish and Urdu. In our study, the KMS was shown to be highly reliable with Cronbach alphas ranging from .90 to .93 across the three countries.

*Brief Accessibility, Responsiveness, and Engagement (BARE) Scale.* The BARE scale is a 12 item self-report measure that assesses the attachment behaviours of people and their partners in a relationship, thus indicating the quality of the relationship (Sandberg, Busby, Johnson & Yoshida, 2012). It consists of three subscales, relating to the accessibility (the availability of the person to their partner, e.g., ‘*It is hard for my partner to get my attention*’), responsiveness (the ability to respond to the partner in a comforting and soothing way e.g., ‘*I listen when my partner shares his/her deepest feelings*’) and engagement (the likelihood of bonding moments in the relationship e.g., ‘*It is hard for me to confide in my partner*’) of the self and the partner in the relationship. The responses are assessed using a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Internal consistency for the items range from .66 to .85 and the test-retest scores of the subscales ranged from .60 to .75. IRT analysis of the scales showed results consistent with the internal consistency scores and demonstrated the scales had adequate reliability in both clinical and non-clinical samples (Sandberg et al., 2012; 2016). The adapted Turkish version of the BARE scale (Zeytinoglu, Akyil, & Erdem, 2018) demonstrated good test-retest reliability (range .79 -.86) and internal consistency of subscales ( $\alpha = .86-.91$ ). A translated Urdu version of the original BARE scale by Sandberg and colleagues was also employed. In this study the BARE scale demonstrated good reliability with Cronbach alphas ranging from .85 to .92.

*Beck Anxiety Inventory (BAI).* The BAI is a 21 item measure of the somatic, cognitive, and subjective features of anxiety (Beck, Epstein, Brown, & Steer, 1988). The items are rated on a 4-point Likert scale ranging from ‘not at all’ to ‘severely’. The BAI has a high internal



consistency, with alphas from .92 to .94 (Beck et al., 1988; Fydrich, Dowdall & Chambless, 1992; Steer, Ranieri, Beck, & Clark, 1993). It has been demonstrated to show good convergent and discriminant validity (Fydrich et al, 1992). The Turkish version of the Beck Anxiety Inventory (Ulusoy, Sahin & Erkmen 1998) has an internal consistency of .93 and was used for this study. We also used an Urdu translation of the BAI that is currently being utilised by clinicians in Pakistan. In our study, all three versions of the BAI demonstrated high reliability coefficients with alphas ranging from .91 to .95.

### **2.3. Procedure**

Participants in Turkey and Pakistan were recruited through snowball sampling methods, such as listservs, ads in social media and online academic portals, and through word-of-mouth. Participants in the USA were recruited through Mechanical TURK (MTURK), an online marketplace for work that utilises human intelligence for various paid tasks. Potential participants were directed to an online survey through Qualtrics and were informed about the study. Those that met the eligibility criteria continued with the consent form and then the survey. It took approximately 15 minutes to complete the survey.

Upon completion of the survey, all participants had the option to enter a lottery to win a \$20 gift card (or the equivalent in Turkish/Pakistani currency). Additionally, participants in the USA were reimbursed \$0.25 for their participation through MTURK. All participants completed the survey in their native language. Study procedures were approved by the Institutional Review Board of Koç University (2016.150.IRB3.083).

### **2.4. Data Analysis**

Preliminary data analyses examined the frequencies (means and standard deviations), as well as the distributions of variables of interest (skewness and kurtosis). Bivariate correlations

were run to examine the associations between the independent and dependent variables. In addition, a series of one-way ANOVAs and Chi-square tests were conducted to examine differences in the dependent and independent variables between the three countries (the USA, Turkey, and Pakistan).

The study hypotheses were tested using Path Analysis in a Structural Equation Modelling (SEM) paradigm. Path analysis tests for the strength of relationships between observed variables by extending multiple linear regression concepts (Keith, 2015). SEM is preferred (over Multiple Linear Regression) due to its ability to simultaneously fit multiple regressions and estimate measurement error, as well as provide diagnostics for model fit and improvements (Iacobucci, 2009). Model fit indices give mathematical estimates of the extent to which the hypothesised model fits the observed data. Goodness-of-fit of the models were estimated through the Root Mean Squares Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and Normed Fit Index (NFI). An RMSEA below .08 indicates adequate, below .05 indicates good fit. For all other indices, values above .90 indicate a good model fit (Hair, Black, Babin & Anderson, 2009).

In path analysis, autonomy, relatedness, and differentiation of self were entered as exogenous variables, while relationship satisfaction, relationship quality, and anxiety were endogenous variables. Additionally, we used the variables of age, gender, commitment, and education level as auxiliary variables in the model. We conducted preliminary analyses using IBM SPSS Statistics for Windows, version 23.0. To determine the best model for our SEM analysis, AMOS 21.0 (Arbuckle, 2012) was utilised to determine the most appropriate measurement and structural model for SEM. We ultimately determined that the model with the best fit to the data was a path analysis with added covariates. We also tested constrained models for each exogenous variable for all three countries i.e. we freely estimated only one exogenous

variable e.g. autonomy, whilst imposing equality constraints on the other two variables e.g. differentiation and relatedness (Kelloway, 1995).

We then used AMOS 21.0 to test whether the parameter estimates obtained from the individual path analyses had significant differences across countries utilising multi-group analysis. To analyse which specific countries differed significantly from one another in the multi-group analysis we generated standard errors and confidence intervals for the difference in paths for two countries at a time to evaluate whether the difference between regressions was significant at the 95% confidence level. To do this we employed an estimand specifically developed for AMOS for this purpose (Gaskin, 2016)

## CHAPTER 3

### RESULTS

#### 3.1. Preliminary Analysis

Inter-correlations between the variables in our model are shown in Table 2. Results indicated that autonomy and the DoS were positively and significantly correlated across all countries, with coefficients ranging from .37 to .56 ( $p < .05$ ). Autonomy was significantly and positively correlated with relationship quality ( $r = .17-.39, p < .05$ ) and relationship satisfaction ( $r = .15-.50, p < .05$ ), but negatively correlated with anxiety ( $r = -.24$  to  $-.35, p < .001$ ) in all countries. These correlations were highest in the USA.

The DoS, similar to autonomy, exhibited positive correlations with relationship satisfaction and quality but highly negative correlations with anxiety in all countries ( $r = -.35$  to  $-.50$ ). Relatedness was only significantly correlated with the dependent variables in the USA sample; it was highly and positively correlated with relationship satisfaction ( $r = .47, p = .000$ ) and quality ( $r = .44, p = .000$ ) but negatively correlated with anxiety ( $r = -.17, p = .02$ ). Autonomy was significantly correlated with relatedness in the USA ( $r = .54, p = .000$ ) and Pakistan ( $r = .24, p = .003$ ), but not in Turkey.

Results of one-way ANOVAs showed that participants in Pakistan reported significantly lower autonomy [ $F(2, 552) = 6.95, p = .001$ ] and differentiation [ $F(2, 552) = 7.53, p = .001$ ] than other participants. Further, Turkish participants reported higher relatedness [ $F(2, 552) = 36.43, p = .000$ ] as well as higher relationship satisfaction [ $F(2, 552) = 9.91, p = .000$ ] and relationship quality [ $F(2, 552) = 28.82, p = .000$ ] than their counterparts. Anxiety was also

Table 2.

*Bivariate correlations between independent and dependent variables*

|                | 1                    | 2               | 3                    | 4                   | 5                 | 6 |
|----------------|----------------------|-----------------|----------------------|---------------------|-------------------|---|
| 1. Autonomy    | —                    |                 |                      |                     |                   |   |
| 2. Relatedness | .54**/.06/.24**      | —               |                      |                     |                   |   |
| 3. DSI         | .37**/.56**/.51**    | 0.12/-.20**/.02 | —                    |                     |                   |   |
| 4. BAI         | -.35**/-.24**/-.27** | -.17*/.03/.05   | -.40**/-.35**/-.50** | —                   |                   |   |
| 5. KMS         | .50**/.15*/.19*      | .47**/.09/.13   | .27**/.27**/.38**    | -.19**/-.18*/-.31** | —                 |   |
| 6. BARE        | .39**/.17*/.24**     | .44**/.01/.07   | .47**/.20**/.44**    | -.28**/-.08/.19*    | .62**/.67**/.62** | — |

*Note.* DSI = Differentiation of Self Inventory; BAI = Beck Anxiety Inventory; KMS = Kansas Marital Satisfaction Scale ; BARE = Brief Accessibility, Responsiveness, And Engagement Scale (relationship quality). Correlations are reported for each country in the following order: USA/Turkey/Pakistan

\*\* Correlation is significant at the 0.001 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

Table 3.

*Model Comparisons and Fit Indices*

| Model                         | USA           |          |       |       |       |        | Turkey        |          |       |       |       |       | Pakistan      |          |       |       |       |       |
|-------------------------------|---------------|----------|-------|-------|-------|--------|---------------|----------|-------|-------|-------|-------|---------------|----------|-------|-------|-------|-------|
|                               | $\chi^2$ (df) | <i>p</i> | CFI   | NFI   | TFI   | RMSEA  | $\chi^2$ (df) | <i>p</i> | CFI   | NFI   | TFI   | RMSEA | $\chi^2$ (df) | <i>p</i> | CFI   | NFI   | TFI   | RMSEA |
| SEM Model 1                   | 0.687         | .503     | 1.000 | 0.996 | 1.013 | .000** | 1.27          | .282     | 0.998 | 0.990 | 0.984 | 0.037 | 3.70          | .025     | .975  | .967  | .809  | .131  |
| SEM Model 2                   | 1.315         | .238     | 0.995 | 0.980 | 0.973 | .040   | 1.227         | .283     | 0.995 | 0.977 | 0.976 | 0.034 | 2.021         | .049     | 0.975 | 0.956 | 0.872 | 0.080 |
| SEM Model 3                   | 1.208         | .270     | 0.995 | 0.971 | 0.980 | 0.032  | 1.692         | .062     | 0.985 | 0.966 | 0.944 | 0.060 | 1.469         | .127     | 0.986 | 0.960 | 0.947 | 0.055 |
| SEM Model 1 (Multiple Groups) | 1.88          | .079     | .993  | .987  | .951  | .04*   |               |          |       |       |       |       |               |          |       |       |       |       |
| SEM Model 2 (Multiple Groups) | 1.521         | .059     | 0.990 | 0.973 | 0.947 | 0.031  |               |          |       |       |       |       |               |          |       |       |       |       |
| SEM Model 3 (Multiple Groups) | 1.456         | .038     | 0.988 | 0.966 | 0.957 | 0.029  |               |          |       |       |       |       |               |          |       |       |       |       |

*Note.* Model 1 refers to baseline model with only the observed independent and dependent variables. Model 2 refers to the baseline model with the covariates age, gender and commitment. Model 3 refers to the baseline model with covariates age, gender, commitment and education level.

significantly different across countries [ $F(2, 552) = 13.96, p = .000$ ], with Pakistani youth reporting the highest levels, followed by American youth and Turkish youth.

### 3.2. Path Analysis Process and Main Findings

We tested three path models independently for each country and as multi-group analyses. Model 1 (baseline model) included only the independent and dependent variables; Model 2 consisted of the baseline model along with the covariates of age, gender, and commitment; and Model 3 contained the baseline model with the covariates of age, gender, commitment, and education level. The fit indices of all models are presented in Table 3. After examining the model fit indices, Model 2 was selected as the final model, indicating the best fit to the data for both the individual and multi-group analyses. The final model demonstrated a good fit to the USA data [ $\chi^2(7) = 9.20, p = .24; CFI = .995; NFI = .98; RMSEA = .04$ ] and Turkish data [ $\chi^2(7) = 8.59, p = .28; CFI = .995; NFI = .98; RMSEA = .03$ ] and an adequate fit for the Pakistan data [ $\chi^2(7) = 14.15, p = .05; CFI = .98; NFI = .96; RMSEA = .08$ ].

Table 4 and Figure 3 show the path analysis coefficients and  $p$  values of the final model. As hypothesised, higher levels of DoS predicted lower levels of anxiety and that finding was consistent across countries, with standardised coefficients ranging from  $-.30$  to  $-.45$  ( $p < .001$ ). The associations between the DoS and relationship quality and satisfaction were mixed. Specifically, the DoS was positively associated with relationship satisfaction in Turkey [ $\beta = .20, p = .006$ ] and Pakistan [ $\beta = .31, p = .000$ ], and this link was marginally significant in the USA [ $\beta = .12, p = .05$ ]. Further, the DoS was positively related to relationship quality in the USA [ $\beta = .41, p = .000$ ] and Pakistan [ $\beta = .46, p = .000$ ], but not in Turkey [ $\beta = .11, p = .14$ ]. However when

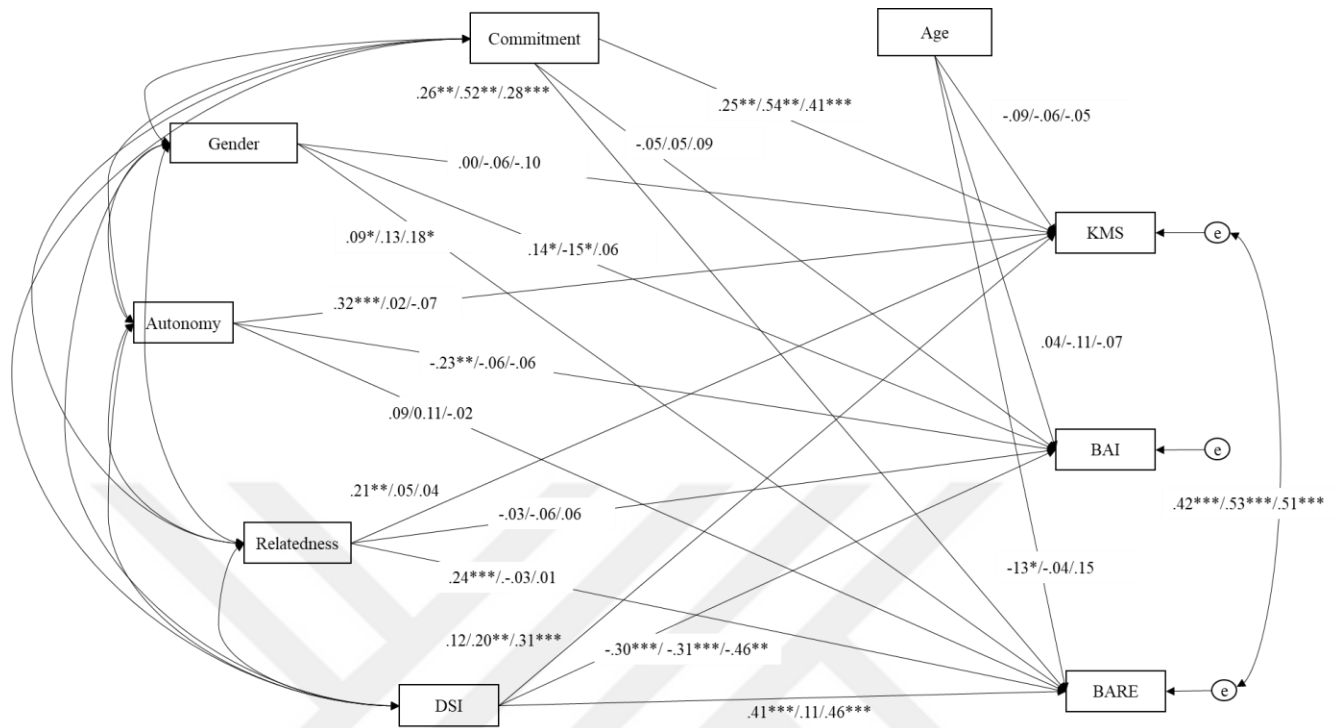


Figure 3. SEM Model 2 for all countries with covariates age, gender and commitment

Note. DSI = Differentiation of Self Inventory; BAI = Beck Anxiety Inventory; KMS = Kansas Marital Satisfaction Scale ; BARE = Brief Accessibility, Responsiveness, And Engagement Scale (relationship quality). Standardized regression coefficients for each country are presented in the following order- USA/Turkey/Pakistan. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

autonomy and relatedness were constrained, the links between the DoS and relationship variables were significant for all countries

Regarding the A-R findings, analysis revealed that the findings were similar between Turkey and Pakistan, but not the USA. In the Turkish and Pakistani samples, neither autonomy nor relatedness was associated with relationship satisfaction, quality, or anxiety (see Table 4 and Figure 3a for coefficients). In the USA sample, higher levels of autonomy predicted better relationship satisfaction [ $\beta = .32$ ,  $p = .000$ ] and lower anxiety [ $\beta = -.23$ ,  $p = .003$ ]. Similarly, higher relatedness in the USA sample was associated with higher relationship satisfaction [ $\beta = .20$ ,  $p = .004$ ] and quality [ $\beta = .26$ ,  $p = .000$ ]. However, when we constrained the DoS and



relatedness in the model, autonomy emerged as a significant predictor of anxiety and relationship quality in all countries, as well as a predictor of relationship satisfaction in the USA and Turkey.

Regarding control variables, a few findings are noteworthy. It was found that women were significantly more anxious than men in Turkey [ $\beta = .15, p = .03$ ] and the USA [ $\beta = .14, p = .04$ ]. Women were also more likely to report better relationship quality in Pakistan [ $\beta = .18, p = .01$ ] than in other countries. Relationship quality was also significantly affected by age in the USA, where younger people reported better levels of relationship quality [ $\beta = -.13, p = .01$ ]. Commitment was found to be a significant and positive predictor of both relationship quality [USA:  $\beta = .26, p = .000$ ; Turkey:  $\beta = .52, p = .000$ ; Pakistan:  $\beta = .28, p = .000$ ] and satisfaction [USA:  $\beta = .25, p = .000$ ; Turkey:  $\beta = .54, p = .000$ ; Pakistan:  $\beta = .41, p = .000$ ] for all countries, although the magnitude of the relationships did differ across these groups.

The USA model explained 39% of variance for anxiety, 23% for relationship satisfaction, and 46% for relationship quality. The Turkish model accounted for 38%, 16% and 37% of the variance explained in anxiety, relationship satisfaction, and relationship quality respectively. Finally, the Pakistan model accounted for 31%, 26% and 30% of the variance in anxiety, relationship satisfaction, and quality

Table 4.

*Structural Equation Modeling results for the final model*

| Variables                 | <u>USA</u>               |                |                       | <u>Turkey</u>            |                |                       | <u>Pakistan</u>          |                |                       |
|---------------------------|--------------------------|----------------|-----------------------|--------------------------|----------------|-----------------------|--------------------------|----------------|-----------------------|
|                           | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> |
| Autonomy on:              |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | -.23                     | <i>p</i> <.01  | .388                  | -.06                     | .48.           | .381                  | -.06                     | .50            | .313                  |
| Relationship Satisfaction | .32                      | <i>p</i> <.001 | .226                  | .02                      | .77            | .159                  | -.07                     | .38            | .259                  |
| Relationship Quality      | .09                      | .20            | .459                  | .11                      | .15            | .37                   | -.02                     | .80            | .304                  |
| Relatedness on:           |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | -.03                     | .05            |                       | -.06                     | .37            |                       | .06                      | .41            |                       |
| Relationship Satisfaction | .20                      | <i>p</i> <.01  |                       | .05                      | .43            |                       | .04                      | .61            |                       |
| Relationship Quality      | .26                      | <i>p</i> <.001 |                       | .03                      | .62            |                       | .02                      | .87            |                       |
| Differentiation on:       |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | -.30                     | <i>p</i> <.001 |                       | -.31                     | <i>p</i> <.001 |                       | -.45                     | <i>p</i> <.001 |                       |
| Relationship Satisfaction | .1                       | .05            |                       | .20                      | <i>p</i> <.01  |                       | .31                      | <i>p</i> <.001 |                       |
| Relationship Quality      | .41                      | <i>p</i> <.001 |                       | .11                      | .14            |                       | .46                      | <i>p</i> <.001 |                       |

| Variables                 | <u>USA</u>               |                |                       | <u>Turkey</u>            |                |                       | <u>Pakistan</u>          |                |                       |
|---------------------------|--------------------------|----------------|-----------------------|--------------------------|----------------|-----------------------|--------------------------|----------------|-----------------------|
|                           | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> | Standardized coefficient | <i>p</i>       | <i>R</i> <sup>2</sup> |
| Age on:                   |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | .04                      | .48            |                       | -.11                     | .10            |                       | -.07                     | .30            |                       |
| Relationship Satisfaction | -.08                     | .14            |                       | -.06                     | .32            |                       | -.05                     | .46            |                       |
| Relationship Quality      | -.13                     | <i>p</i> <.05. |                       | -.04                     | .56            |                       | .05                      | .44            |                       |
| Gender on:                |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | .14                      | <i>p</i> <.05  |                       | .15                      | <i>p</i> <.05  |                       | .06                      | .39            |                       |
| Relationship Satisfaction | .00                      | .97            |                       | -.05                     | .36            |                       | -.10                     | .17            |                       |
| Relationship Quality      | .09                      | .11            |                       | .13                      | <i>p</i> <.05  |                       | .18                      | <i>p</i> <.05  |                       |
| Commitment on:            |                          |                |                       |                          |                |                       |                          |                |                       |
| Anxiety                   | -.05                     | .49            |                       | .05                      | .47            |                       | .09                      | .21            |                       |
| Relationship Satisfaction | .25                      | <i>p</i> <.001 |                       | .54                      | <i>p</i> <.001 |                       | .41                      | <i>p</i> <.001 |                       |
| Relationship Quality      | .26                      | <i>p</i> <.001 |                       | .52                      | <i>p</i> <.001 |                       | .28                      | <i>p</i> <.001 |                       |

### 3.3. Multiple Group Analysis

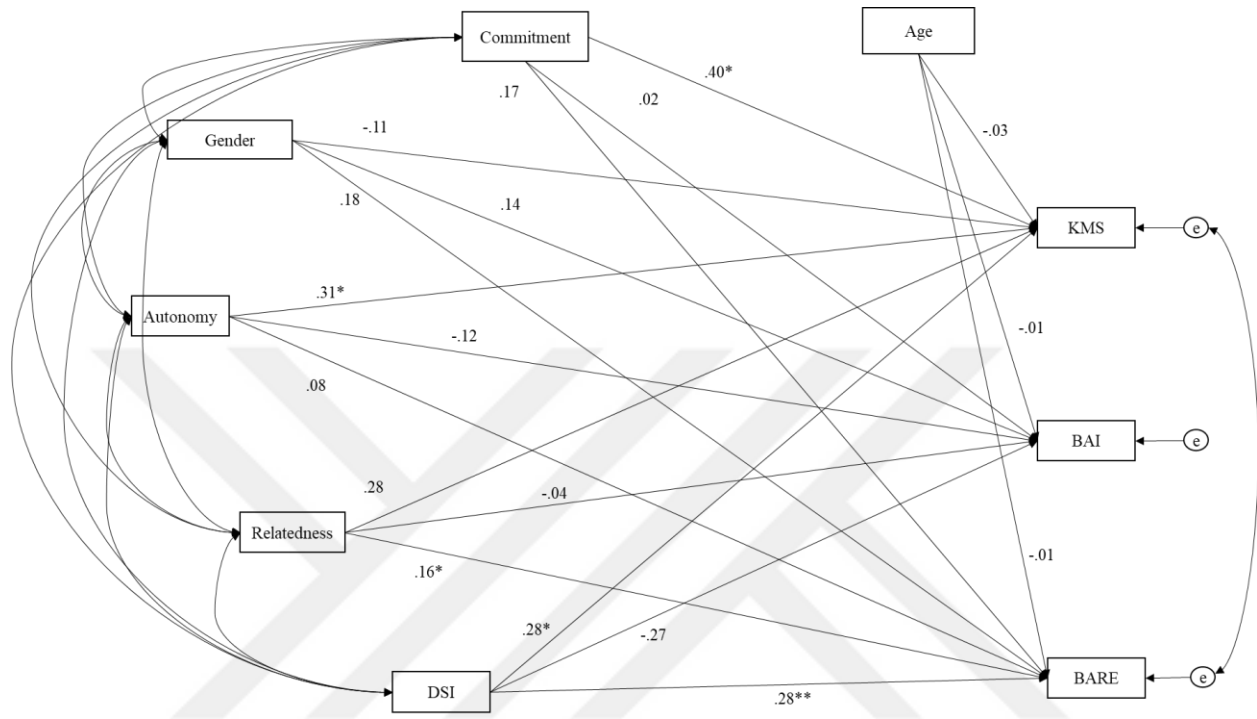


Figure 4. Model of Multi-group Analysis for SEM Model 2

Note. DSI = Differentiation of Self Inventory; BAI = Beck Anxiety Inventory; KMS = Kansas Marital Satisfaction Scale ; BARE = Brief Accessibility, Responsiveness, And Engagement Scale (relationship quality).

\* $p < .05$

A multi-group analysis of the final model exhibited a good fit to the data [ $\chi^2 (21, n = 555) = 31.95, p = .06; CFI = .99; NFI = .95; RMSEA = .03$ ], and a Chi-square difference test, [ $\chi^2 (36) = 90.33, p = .000$ ] indicated that the constrained model was superior to the unconstrained model. Further analyses showed that the countries differed significantly in their associations between the DoS and relationship satisfaction [ $\chi^2 (2, n = 555) = 6.18, p = .046$ ]. The link between the DoS and relationship satisfaction was significantly higher in Pakistan, as compared to USA [ $\beta = -.41,$

$p = .03$ ], but this link was not significantly different when comparing the USA and Turkey and Turkey and Pakistan respectively.

The association between the DoS and relationship quality also differed significantly across countries [ $\chi^2 (2, n=555) = 15.70, p = .000$ ]. The association between the DoS and relationship quality was the lowest in Turkey, as compared to Pakistan [ $\beta = -.36, p = .004$ ] and the USA [ $\beta = -.29, p = .002$ ]; the magnitude of this association was similar when comparing the USA and Pakistan [ $\beta = -.05, p = .66$ ].

The association between autonomy and relationship satisfaction also differed across countries [ $\chi^2 (2, n=555) = 12.86, p = .002$ ] and was significantly stronger in the USA than either in Turkey [ $\beta = -.58, p = .006$ ] or Pakistan [ $\beta = .82, p = .008$ ]. Similarly, relatedness and relationship quality also differed across countries [ $\chi^2 (2, n=555) = 7.10, p = .03$ ] where this link was significantly stronger in the USA as compared to Turkey [ $\beta = -.26, p = .03$ ] but similar to that of Pakistan. The link between commitment and relationship satisfaction was also different across countries [ $\chi^2 (2, n=555) = 6.64, p = .04$ ] and showed the greatest magnitude in Turkey.

Multiple group analyses also revealed that the covariance between each of the exogenous variables differed significantly across countries. Autonomy and relatedness had the weakest association in Turkey [ $\chi^2 (2, n=555) = 34.93, p = .000$ ], while relatedness and the DoS were the most correlated in Turkey [ $\chi^2 (2, n=555) = 9.36, p = .009$ ]. The relationship between the DoS and autonomy was not significantly different amongst the three countries.

## CHAPTER 4

### DISCUSSION

The present study investigated self-construals, as defined by the Bowen family systems theory and family change theory, which were associated with the romantic relationship experiences and state anxiety of individuals in dating relationship across three different cultures (the USA, Turkey, and Pakistan). In line with BFST principles, we found strong support for the relationship between anxiety and the DoS across cultures. In other words, higher levels of DoS predicted lower levels of anxiety among young adults, and this finding was consistent across all three cultures. This finding is also consistent with earlier empirical studies (e.g., Peleg & Rahal, 2012; Peleg-Popko, 2002; Xue et al., 2016).

Further, the DoS predicted higher relationship satisfaction and quality in all countries, except for Turkey, thus findings partially support hypotheses related to BFST and relationship outcomes. The multiple group analysis indicated that the association between commitment and relationship satisfaction was strongest in Turkey, as compared to Pakistan and the USA. It appears that relationship satisfaction in the Turkish context could be more related to proximal factors (such as characteristics of the relationship, level of commitment, and one's level of investment in the relationship), than intrapersonal processes such as the DoS. Indeed, the amount of investment in the relationship has been shown to promote commitment, which in turn predicts dyadic adjustment (Rusbult, 1980; Rusbult, Martz & Agnew, 1988). Buyukbayraktar, Ozteke and Kesici (2015) also found a high correlation between aspects of commitment and dyadic adjustment.

On the other hand, our findings also support our prior critique of BFST of being a culturally biased framework regarding self-construal (Erdem & Safi, in press). For instance, the association of the DoS and relationship outcomes were almost identical to the association between autonomy and relationship outcomes. Further analysis of the covariances and constrained models also confirmed that autonomy and the DoS overlapped to a great extent in the USA sample, and this association was significantly higher than that of Turkey and Pakistan. On the other hand, the DoS overlapped with relatedness in the Turkish sample. Those findings are contrary to Bowen's notion that the DoS is a 'balance of separateness and connectedness'. Rather, it appears that the DoS is more related to autonomy in the USA context and more associated with relatedness in the Turkish context. This reflects the pattern of mixed findings for BFST premises in research done in cultures where aspects of individualism and collectivism can both be found (Gushue & Constantine, 2003) and where the concept of fusion may denote a different meaning than what Bowen ascribed (Kim et al., 2014).

Regarding the current findings in relation to FCT, there was some support for our hypotheses, but only in the constrained models. In other words, when the DoS was constrained in the model, the A-R appeared to predict relationship outcomes. However, when the A-R were tested simultaneously with the DoS, the A-R were related to relationship outcomes only in the USA sample. We were expecting the A-R to be associated with relationship outcomes and anxiety above and beyond the DoS, and this hypothesis was not supported. However, the FCT premises regarding cultural differences in the A-R were supported, given the association between relatedness and the DoS as compared to the DoS and autonomy. Studies show that autonomy and relatedness can coexist and that different socialisation values can lead to the engendering of different levels of A-R (Kağıtçıbaşı, Ataca & Diri, 2010; McShane, Hastings, Smylie, & Prince,

2009; Phalet & Schonpflug, 2001; Tulviste, Mizera, De Geer & Tryggvason, 2007). Our results follow the pattern that within different cultures different values of A-R will exist.

There were also some unexpected findings in the study. Contrary to the FCT, we did not find the USA highest in autonomy and lowest in relatedness, nor did we find Pakistan highest in relatedness and lowest in autonomy. We expected that relatedness would be less predictive of relationship experiences in a culture of separateness, but we found relatedness had the strongest association with relationship quality in the USA. Those findings are possibly due to the characteristics of the samples. The Pakistani sample was urban and highly educated, with middle to high SES, and thus was not representative of a family model of interdependence. According to Kağıtçıbaşı, such a sample would qualify more as a family model of emotional interdependence with autonomous-related self-construal. Indeed, our findings in the Turkish and Pakistani samples were similar to one another, as the samples were more representative of emotionally interdependent cultures.

Another surprising finding concerned the association of autonomy and relatedness across countries. In the USA and Pakistan, autonomy and relatedness were positively and significantly correlated, however this was not the case in Turkey. Autonomy and relatedness are expected to correlate as agency can be in an other-directed direction, and this sort of association has been demonstrated in previous investigations (Kağıtçıbaşı et al., 2016). The weak, non-significant correlation in Turkey may indicate that individuals there may just be exercising their agency to serve purposes that are mostly unrelated to maintaining close relationships.

This study also found that in Pakistan, anxiety correlated positively with relationship quality. This seems counterintuitive to the BFST, which claims that anxiety in the system would negatively impact interpersonal relations. One prospective explanation for this can come from



attachment theory (Bowlby, 1979; Hazan & Shaver, 1987). According to this perspective people who have attachment anxiety have a hyperactivation in the attachment system, which manifests itself in needy and demanding behaviour (Feeney, 2016), and has been linked to lower levels of relationship quality (Holland, Fraley & Roisman, 2012; Holland & Roisman, 2010). However, in this sample, it may indicate that these “needy” behaviours may actually be valued in this culture, considered part of normal relationship behaviours, and hence contribute to the production of behaviour that helps maintain a healthy relationship.

Another important finding was the role of commitment. It was not a surprise that commitment explained the variance in relationship satisfaction and quality, which is a consistent finding in family science research (e.g., Le & Agnew, 2003). Yet the addition of commitment also changed how relatedness predicted relationship quality and satisfaction (in other words, it changed the significant relationships in the original model into non-significant ones). In Turkey, relatedness and commitment covaried in a way that they overlapped to explain variance in the relationship measures, thus indicating that individual processes along with culture had an impact on relationship experiences. Future research should further examine the ways in which commitment and self-construal interact to impact romantic relationship quality and satisfaction.

#### **4.1. Limitations and Strengths**

One of the major limitations of the study was the sampling procedure and selection bias, especially in the Pakistani sample. Data collection in Pakistan was challenging due to non-marital romantic relationships being a taboo topic. Although the original data collection plan was to recruit participants through educational institutions in order to reach a wide range of Pakistani young adults from different SES levels, stigma and worries over confidentiality kept administrators from giving official permission for university-wide data collection. Eligible young

adults in Pakistan were also resistant to participate in the study because of the topic. As a result, Pakistani data were collected through online resources, which constrained the sample to highly educated and high SES participants. Of note, American youth were recruited through MTURK, and most of the participants came from low to middle SES levels. Given those issues, samples that were assumed to represent cultures of relatedness and cultures of independence were confounded with SES, and findings of the study should be interpreted with caution. Another limitation of the study was that the sample included young adults in heterosexual non-marital relationships. Future research should examine romantic relationships in a more dyadic manner, with inclusion of data collection from both partners across wide range of relationships (dating, engaged, or married) and/or sexual orientations (same sex couples).

Despite those challenges and limitations, the current study is an innovative contribution to relationship research at multiple levels. First and foremost, the study was guided by two empirically validated theories (Bowen family systems theory and family change theory) and had strong theoretical rationales for its design, sampling, and analysis. That being said, this study is one of the few studies that focuses on relationship quality and satisfaction from a cultural perspective. This is especially salient as research concerning emotionally-interdependent cultures is still in its nascent stages (see Celenk & van de Vijver, & Goodwin, 2011; Kağıtçıbaşı, Ataca & Diri, 2010; for exceptions). To lump such cultures (and countries) into either individualistic or collectivistic orientations is problematic as it presents an issue in interpreting data accurately.

Another strength of this study is that it carried out romantic relationship research in countries where there is a lack of studies investigating relationship experiences, particularly those of unmarried, dating adults. This study adds to the knowledge of relationships in Pakistan and Turkey and does so in a cross-cultural manner. Furthermore, it attempted to capture

individuals within their own cultures, rather than relying on immigrant populations in Western countries, which is often the case when it comes to relationship research with non-Western populations. Much of the data we have regarding Pakistani individuals is from second-generation immigrant families, who are often grouped together with participants from other countries as ‘South Asian’ (Ahluwalia & Suzuki, 2008; Lalonde, Hynie, Pannu & Tatla, 2004; Samuel, 2010; Talbani & Hasanali, 2000). While research on dating is a growing field in Turkey, with topics such as infidelity (Toplu-Demirtaş & Fincham, 2017), mate choice (Günaydin, Selcuk, Yilmaz & Hazan, 2017), and jealousy (Karakurt., 2012) amongst others being explored, there is still very little research (see Celenk & van de Vijver, & Goodwin, 2011) to date regarding autonomy and relatedness’ effects on relationships.

#### **4.2. Implications for Future Research and Practice**

The current study investigated the potential integration of Bowen and Kağıtçıbaşı’s frameworks. Judging from the results, further research with higher sample sizes and greater diversity in nationalities and countries is needed to explore the association of culture, self-construal, and romantic relationships. Future research may also be able to employ measurement models instead of our simple path analysis, and see how specific sub-constructs (e.g. fusion or I-Position in the differentiation scale) relate to our independent and dependent variables.

The current study also suggests empirical evidence for the further evaluation of the cultural validity of the DoS and the ways in which the construct applies in non-individualistic countries. Such an effort may necessitate revision of the differentiation scales to better encompass the DOS in different cultural contexts. Similarly, it would be wise to also include other measures of commitment as well as other correlates of relationship quality/satisfaction, such as communication skills, in order to better understand such interpersonal phenomena.

We demonstrated that there are inconsistencies in BFST-related results which can potentially be explained by underlying cultural dimensions- an explication of which can be found within the Family Change Theory- thus providing a useful heuristic to integrate into existing family systems theory to make it more culturally applicable. In that vein, we may use this study as a base for empirically studying the applicability of a framework that integrates knowledge of self construals as given by Kağıtçıbaşı and concepts of BFST to interpret psychological and relational phenomena (see Erdem & Safi, in press).

We did not test for mediation models, however it would also be interesting to note how self-construals mediate the relationship between differentiation and inter- and intrapersonal outcomes. This would be interesting for our conceptualization of an integrative framework, as it would inform us of specific mechanisms that work within this conceptualization.

Speaking of mediation models, we may also look at how relationship satisfaction and quality may mediate the impact of self construals and differentiation on anxiety. Past research demonstrated that relationship quality is associated with psychological well-being (Proulx, Helms & Buehler, 2007), therefore it would be interesting to look into how these factors impact one another.

Future research may also want to investigate the effect of gender on DoS, autonomy and relatedness and their subsequent impact on inter- and intrapersonal outcomes. Considering that different cultures may espouse different child-rearing goals according to gender e.g conservative cultures may value parenting orientations that do not foster high levels of agency in women, it would entail differences amongst genders for levels of self construal/differentiation. Hence, including gender as a moderator for subsequent analyses would be beneficial.

For clinicians, this study is valuable as it implies that the current understanding of the DoS operates differently in different cultural contexts and that the balance of closeness and separateness is a function of the overarching culture (Erdem & Safi, in press). Therefore it is imperative that family therapists are aware of the cultural context of self while working with clients. Those findings reveal the importance of extending the idea of ‘culturally-sensitive’ practice or a ‘multicultural framework’ to self-construal and cross-cultural research to develop and implement effective therapeutic interventions and methods from a cultural lens.

### **4.3. Conclusions**

In conclusion, the current findings revealed that the DoS seemed to operate on a more micro and intrapersonal level and that autonomy and relatedness operated at a more relational and mesosystemic level. The findings supported the need for an integrative framework that would potentially combine both of these theories to explain self-construal (Erdem & Safi, in press). This is a first step in a growing body of research regarding the tenets of family change theory and its applications, and we recommend that further research be carried out in different cultures with other interpersonal relationships as well as with more diverse populations.

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## APPENDICES

### Appendix 1: Consent Form

#### CONSENT FORM

We invite you to participate in a research project that examines the association between self-construals, family or origin experiences, and relationship quality and satisfaction and well-being of individuals in romantic relationships. The project is part of a Master's thesis project of Ommay Safi and the study is supervised by Assistant Professor Gizem Erdem at Koç University Department of Psychology. Your participation in this research is completely **voluntary**. Please read the information below and feel free to contact us if you have questions.

**Eligibility:** Please participate only if you are between the ages of 18-25, are currently enrolled in a college/university, have been in a romantic relationship for at least 3 months, and are not engaged or married to your partner.

#### TITLE OF THE PROJECT

A cross-cultural examination of relationship quality and satisfaction: Associations with self-construal and family-of-origin experiences

#### PURPOSE OF THE RESEARCH

The purpose of this study is to explore how romantic relationship experience and well-being of individuals are associated with different types of self-construals across cultures. To that aim, young adults who are in romantic relationships for at least three months will be recruited from the US, Pakistan, and Turkey.

#### PROCEDURES

If you agree to participate in this study, you will be asked to complete the survey. The survey will take approximately 10 minutes and will include questions about your sense of self as well as questions about your current romantic relationship

#### POTENTIAL RISKS AND HARM

Participating in this survey requires collection of some negative experiences and incidents which may cause temporary feelings of distress.

#### POTENTIAL BENEFITS FOR PARTICIPANTS

Your participation to the study will contribute to the accumulation of cross-cultural scientific knowledge of romantic experiences and interpersonal relationships.

Findings of this study will also inform clinicians working with distressed individuals and couples from a multicultural perspective.

Every participant who completes this survey will be entered into a lottery to win a \$20 gift card.

## **CONFIDENTIALITY**

**The information you provide for the current study will be kept confidential and will not be shared with any institution or a third party.**

**The survey will be completely anonymous** and only the research team will have access to the data. To ensure confidentiality, a coding system will be used to create a unique ID number for you and it will be accessible for only authorized researchers. All data will be kept in an encoded database.

## **RIGHT TO DECLINE OR WITHDRAW**

Your participation to the study is completely voluntary. If you decline to participate or decide to withdraw from the study, there will be no negative repercussions or loss of your rights and benefits.

## **RESEARCHER IDENTITY**

If you have any further questions or concerns, please do not hesitate to contact the principal investigator, Ommay Safi. Contact information is given below.

### **Ommay Safi**

Koç University  
Department of Psychology  
Rumelifeneri Yolu, Sariyer, 34450  
Istanbul - Turkey  
osafi15@ku.edu.tr

If you have any concerns about your rights as a research participant, have questions about the research project, or experience any distress related to the questions or topic of this study, please contact Gizem Erdem, Ph.D. at [gizemerdem@ku.edu.tr](mailto:gizemerdem@ku.edu.tr).

**I understand the study policies and procedures as described above. My questions are answered satisfactorily and I approve to participate in this study with the condition of withdrawing any time I want.**

**I agree to participate in the study:**

- YES
- NO

## Appendix 2: Eligibility Screen

### **ELIGIBILITY SCREEN**

Are you between the ages of 18 to 25?

- Yes
- No

Are you currently enrolled in college/university?

- Yes
- No

Are you currently in a romantic relationship that has lasted for at least three months?

- Yes
- No

Are you currently engaged or married?

- Yes

Appendix 3: Demographics Survey & Relationship Questionnaire

**QUESTIONNAIRE**

**What is your gender?**

- Male
- Female
- Other \_\_\_\_\_

**What is your age?** \_\_\_\_\_

**What is your ethnicity?**

- American Indian/Alaska Native
- Asian or Asian American
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Hispanic, non-white
- Middle Eastern
- Mixed ethnicity
- Other \_\_\_\_\_

**What is your annual household income?**

- less than \$15,000
- \$15,000-\$24,999
- \$25,000- \$34,999
- \$35,000-\$44,999
- \$45,000-\$54,999
- \$55,000- \$64,999
- \$65,000- \$74,999
- \$75,000 or more
- I don't want to answer.

**What year are you currently in?**

- Freshman (1st year)
- Sophomore (2nd year)
- Junior (3rd year)
- Senior (4th/final year)
- Graduate School, Masters
- Graduate School, Phd





Appendix 4: Autonomy and Relatedness Scales

Please read each statement and ask yourself “How much do I agree?” There are no right or wrong answers. The best answer is the one that describes your personal view. Circle the response that best indicates how much you agree with each statement.

|  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Agree</b> | <b>Strongly Agree</b> |
|--|--------------------------|-----------------|-----------------------------------|--------------|-----------------------|
| <b>1. I trust myself to get things done</b>  | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>2. I can carry out my decisions</b>   | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>3. Even if I consider the opinions of others around me, my decisions are my own</b> | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>4. I take responsibility for my decisions</b>                                       | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>5. I have my own principles</b>   | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>6. I can make choices easily</b>  | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>7. I make my own decisions</b>  | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>8. I act in line with my choices</b>  | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>9. I can overcome my problems</b>   | 1                        | 2               | 3                                 | 4            | 5                     |
| <b>10. I determine my own destiny</b>  | 1                        | 2               | 3                                 | 4            | 5                     |

Please read each statement and ask yourself “How much do I agree?” There are no right or wrong answers. The best answer is the one that describes your personal view. Circle the response that best indicates how much you agree with each statement.

|            |   | <b>Strongly<br/>Disagree</b> | <b>Disagree</b> | <b>Neither<br/>Agree nor<br/>Disagree</b> | <b>Agree</b> | <b>Strongly<br/>Agree</b> |
|------------|---|------------------------------|-----------------|---|--------------|---------------------------|
| <b>1.</b>  | <b>Being with people close to me is important for my happiness</b>                              | 1                            | 2               | 3   | 4            | 5                         |
| <b>2.</b>  | <b>To me, pleasure is spending time with people close to me</b>                                 | 1                            | 2               | 3   | 4            | 5                         |
| <b>3.</b>  | <b>I feel good when I cooperate with others around me</b>                                       | 1                            | 2               | 3   | 4            | 5                         |
| <b>4.</b>  | <b>I like to live near those who are close to me</b>  | 1                            | 2               | 3   | 4            | 5                         |
| <b>5.</b>  | <b>When I feel close to someone, it feels like that person is an important part of who I am</b> | 1                            | 2               | 3   | 4            | 5                         |
| <b>6.</b>  | <b>If a person hurts someone close to me, I feel personally hurt as well</b>                    | 1                            | 2               | 3   | 4            | 5                         |
| <b>7.</b>  | <b>My relationships with close others make me feel peaceful and secure</b>                      | 1                            | 2               | 3   | 4            | 5                         |
| <b>8.</b>  | <b>What makes people close to me happy makes me happy too</b>                                   | 1                            | 2               | 3   | 4            | 5                         |
| <b>9.</b>  | <b>I care about personal issues of others around me</b>   | 1                            | 2               | 3   | 4            | 5                         |
| <b>10.</b> | <b>I feel responsible to maintain good relations with others around me</b>                      | 1                            | 2               | 3   | 4            | 5                         |

Appendix 5: Differentiation of Self Inventory

**These are questions concerning your thoughts and feelings about yourself and relationships with others. Please read each statement carefully and decide how much the statement is generally true of you on a 1 (*not at all characteristic of me*) to 6 (*very characteristic of me*) scale. If you believe that an item does not pertain to you (e.g., you are not currently married or in a committed relationship, or one or both of your parents are deceased), please answer the item according to your best guess about what your thoughts and feelings would be in that situation. Be sure to answer every item and try to be as honest and accurate as possible in your responses.**

|   | Not at all<br>characteristic<br>of me. |   |   |   |   | Very<br>characteristic<br>of me. |
|---|--|---|---|---|---|----------------------------------|
|   | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I tend to remain pretty calm even under stress.   | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I usually need a lot of encouragement from others when starting a big job or task.      | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| No matter what happens in my life, I know that I'll never lose my sense of who I am.    | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I tend to distance myself when people get too close to me.                              | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| When my spouse/partner criticizes me, it bothers me for days.                           | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| At times my feelings get the best of me and I have trouble thinking clearly.            | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I'm often uncomfortable when people get too close to me.                                | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I feel a need for approval from virtually everyone in my life.                          | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| At times, I feel as if I'm riding an emotional roller-coaster.                          | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| There's no point in getting upset about things I cannot change.                         | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I'm overly sensitive to criticism.  | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I'm fairly self-accepting.  | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I often agree with others just to appease them.   | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| If I have had an argument with my spouse/partner, I tend to think about it all day.     | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| When one of my relationships becomes very intense, I feel the urge to run away from it. | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| If someone is upset with me, I can't seem to let it go easily.                          | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I often feel unsure when others are not around to help me make a decision.              | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I'm very sensitive to being hurt by others.   | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| My self-esteem really depends on how others think of me.                                | 1                                      | 2 | 3 | 4 | 5 | 6                                |
| I tend to feel pretty stable under stress.  | 1                                      | 2 | 3 | 4 | 5 | 6                                |

## Appendix 6: Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

|                         | <b>Not At All</b>        | <b>Mildly- but it didn't bother me much</b> | <b>Moderately- it wasn't pleasant at times</b> | <b>Severely- it bothered me a lot</b> |
|-------------------------|--------------------------|---|--|---------------------------------------|
| Numbness or tingling    | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Feeling hot             | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Wobbliness in legs      | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Unable to relax         | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Fear of worst happening | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Dizzy or lightheaded    | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Heart pounding/racing   | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Unsteady                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Terrified or afraid     | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Nervous                 | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Feeling of choking      | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Hands trembling         | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Shaky / unsteady        | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Fear of losing control  | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Difficulty in breathing | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Fear of dying           | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Scared                  | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Indigestion             | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Faint / lightheaded     | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Face flushed            | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |
| Hot/cold sweats         | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/>                       | <input type="checkbox"/>              |

## Appendix 7: Relationship Satisfaction Scale

Please read each statement and ask yourself “How much do I agree?” There are no right or wrong answers. The best answer is the one that describes your personal view. Select the response that best indicates how much you agree with each statement.

### 1. How satisfied are you with your relationship?

|                        |                   |                       |       |                    |                |                     |
|------------------------|-------------------|-----------------------|-------|--------------------|----------------|---------------------|
| Extremely dissatisfied | Very dissatisfied | Somewhat dissatisfied | Mixed | Somewhat satisfied | Very satisfied | Extremely satisfied |
| 1                      | 2                 | 3                     | 4     | 5                  | 6              | 7                   |

### 2. How satisfied are you with your significant other as a partner?

|                        |                   |                       |       |                    |                |                     |
|------------------------|-------------------|-----------------------|-------|--------------------|----------------|---------------------|
| Extremely dissatisfied | Very dissatisfied | Somewhat dissatisfied | Mixed | Somewhat satisfied | Very satisfied | Extremely satisfied |
| 1                      | 2                 | 3                     | 4     | 5                  | 6              | 7                   |

### 3. How satisfied are you with your relationship with your partner?

|                        |                   |                       |       |                    |                |                     |
|------------------------|-------------------|-----------------------|-------|--------------------|----------------|---------------------|
| Extremely dissatisfied | Very dissatisfied | Somewhat dissatisfied | Mixed | Somewhat satisfied | Very satisfied | Extremely satisfied |
| 1                      | 2                 | 3                     | 4     | 5                  | 6              | 7                   |

## Appendix 7: Relationship Quality Scale

Please circle the number that best represents your experiences in your current relationship with your partner.

|            |   | <b>Never<br/>True</b> | <b>Rarely<br/>True</b> | <b>Sometimes<br/>True</b> | <b>Usually<br/>True</b> | <b>Always<br/>True</b> |
|------------|---|-----------------------|------------------------|---------------------------|-------------------------|------------------------|
| <b>1.</b>  | I am rarely available to my partner                                 | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>2.</b>  | It is hard for my partner to get my attention                       | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>3.</b>  | I listen when my partner shares her/his deepest feelings.           | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>4.</b>  | I am confident I reach out to my partner                            | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>5.</b>  | It is hard for me to confide in my partner.                         | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>6.</b>  | I struggle to feel close and engaged in our relationship.           | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>7.</b>  | My partner is rarely available to me.                               | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>8.</b>  | It is hard for me to get my partner's attention.                    | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>9.</b>  | My partner listens when I share my deepest feelings.                | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>10.</b> | I am confident my partner reaches out to me.                        | 1                     | 2                      | 3                         | 4                       | 5                      |
| <b>11.</b> | It is hard for my partner to confide in me.                         |                       |                        |                           |                         |                        |
| <b>12.</b> | My partner struggles to feel close and engaged in our relationship. |                       |                        |                           |                         |                        |