

THESIS

EMOTIONAL AVAILABILITY OF ADULT INTERPERSONAL RELATIONSHIPS  
QUESTIONNAIRE (EA-AIRQ): VALIDATION AND IMPLICATIONS FOR RESEARCH  
AND PRACTICE

Submitted by

Erandi Herndon

Department of Human Development and Family Studies

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Master's Committee:

Advisor: Zeynep Biringen

Ashley Harvey  
Kimberly Henry

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## ABSTRACT

### EMOTIONAL AVAILABILITY OF ADULT INTERPERSONAL RELATIONSHIPS QUESTIONNAIRE (EA-AIRQ): VALIDATION AND IMPLICATIONS FOR RESEARCH AND PRACTICE

Emotional Availability (EA) is commonly known as a parent-child construct used to describe the level of healthy emotional connection in the dyadic relationships (Biringen et al., 2014). Stemming from John Bowlby's (Bowlby, 1969) work on attachment, EA provides a gauge to the level of parent's receptiveness to a child's emotional feedback, both positive and negative (Biringen et al., 2014). In addition to relationships between the parent and child, EA conceptually should be applicable to a wide array of relationships. This paper will define the construct of EA and its foundations in attachment theory. It will then focus on the development and validation of a brief EA Adult Interpersonal Relationships Questionnaire (EA-AIRQ). A total of 215 Amazon Mechanical Turk workers were administered this measure (with request for participants to complete the measure for 'friends' and then for 'romantic partners'). Participants also completed the measures of attachment and mental well being. The EA-AIRQ was composited in two ways: 1-unit-weighted, with each item equally weighted (by adding all items), and 2-regression-weighted, that is, from a factor analysis for friends and romantic partners separately with the aim of obtaining a one-factor solution. Correlations between these composites and the other administered measures revealed meaningful patterns. Implications for research and clinical practice are discussed.

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## INTRODUCTION

The purpose of this study is to provide a theoretical justification and validation for the Emotional Availability (EA) Adult Interpersonal Relationships Questionnaire (EA-AIRQ). The EA-AIRQ is based on the Emotional Availability Scales used to measure parent-child emotional bonds (Biringen et al., 2014) and has been adapted here for adult-adult relationships. The purpose of this study is to examine the reliability and validity of the EA-AIRQ. This questionnaire may be useful in clinical and research settings as a brief evaluation of the overall emotional climate of close relationships, including friends and romantic partners. Furthermore, this questionnaire is also designed to increase the general public's awareness of emotional availability in their dyadic relationships. First, attachment theory will be described. Next, this study will explore emotional availability as an expansion of attachment theory and describe its relevance as a report measure of the overall quality of adult interpersonal relationships. Lastly, evidence for the reliability and validity of the EA-AIRQ will be provided.

### **Attachment Theory**

Emotional availability is derived, in part, from Bowlby's (1969) attachment theory, which posits that caregiver-child attachment is based on emotional bonds (Bretherton, 1992). With roots in evolutionary theory, attachment theory suggests that a child's first dependency relationship is with its mother, who ensures that the child's social and emotional needs are met. During the time of human evolution, infants who displayed attachment behaviors towards their mothers were likely to survive due to the protection and care that mother provided. Therefore, children who successfully formed a secure attachment with their mother seemed to have an evolutionary survival advantage (Cassidy, 2002). Attachment can be seen particularly when a child is presented with an ambiguous or threatening situation, in which the mother serves as a

source of protection or comfort during those times of need. This is particularly important during a child's early development, when he/she is completely dependent on one focused caregiver, usually the mother. During this time, the infant's mother becomes the secure base and allows the infant to feel confident in exploring the environment (Ainsworth, 1969). The infant then learns to turn to this caregiver in times of emotional distress, fatigue, or illness.

Mary Ainsworth developed the most widely known and validated measure of attachment—the Strange Situation Procedure (SSP, Ainsworth et al., 2015). The SSP takes place under laboratory conditions in which a mother and infant experience two short separations and two reunions. Researchers observe the behavior of the child in this context, and especially the infant's reaction to reunions with the mother. The exploratory behavior of the child, particularly what is called the attachment-exploration balance (the balance between connection and autonomy) is also observed.

Based on the behavior displayed by the child, and particularly during their reunion, researchers are able to categorize babies into three different types of attachment: secure, insecure-avoidant, or insecure-ambivalent (Ainsworth et al., 2015). Most infants (approximately 68%) use their attachment figure as a safe base and curiously explore the room around them. In this pattern of attachment, the infant is visibly upset when the caregiver leaves, but is then easily soothed when the caregiver returns. These are signs that a child feels confident using the caregiver as a secure base--as long as the caregiver is present, the infant feels safe to explore their environment, but is distressed when the safe haven or secure base is absent. Upon the return of the caregiver, the infant is soothed almost instantly, showing that the mother is viewed as a trusted and secure haven. This pattern of attachment is termed secure. Such a pattern is

typically associated with a sensitive, caring style of interaction with the mother during the first year of life (Ainsworth, Blehar, Waters, & Wall, 1978).

When an infant shows no or limited distress when the caregiver leaves the room, over-focuses on the tasks or toys in the room, and displays little interest when the caregiver returns, the pattern of attachment is classified as insecure-avoidant. Such infant behaviors are signs that the child cannot use the caregiver as a secure base for exploration and is unable to feel a sense of security and trust when separated from her. The lack of a secure emotional connection to the caregiver makes it difficult for such infants to feel a sense of trust that the caregiver will return and attend to their emotional needs in a prompt and responsive way. Such children have been found to have caregivers who are rejecting and insensitive to their needs during the first year of life. Approximately 20% of the general population fall into this category (Ainsworth et al., 1978).

A third common pattern is also observed in the SSP. In these situations, the infant displays clingy and dependent behaviors during interactions with the caregiver and extreme distress upon leave-taking. When the caregiver returns, such an infant approaches the caregiver, but seems unable to be soothed by the interaction or by the physical contact which may ensue. These behaviors indicate that the infant has failed to develop feelings of security in using their caregiver as a safe base and need constant proximity to be able to maintain a sense of felt security. This pattern of attachment is referred to as insecure-resistant or anxious/ambivalent, because they are anxious in needing to work harder to keep the caregiver close and able to provide the security they so desperately need. Such caregivers have been found to show inconsistent levels of responsiveness towards the infant's needs during the first year of life (Ainsworth & Bell, 1970) but are capable of being sensitive when the child is persistent in



his/her expressions of need. Approximately 10% of infants in the general population are classified in this way (Ainsworth et al., 1978).

A fourth category became apparent through a systemic inspection of 200 cases that were difficult to categorize. Disorganized attachment refers to children who display a lack of organized strategy to cope with dysregulation during the SSP (Main & Solomon, 1986). A common denominator of children in this category is a background of abuse or neglect, although it is also observed in the normal population, often where a child is frightened in some more subtle way or is exposed to affective errors in communication (Lyons-Ruth, 1996). Some characteristics of disorganized attachment include contradictory behavior, misdirected or stereotypical behavior, stilling or freezing for a substantial amount of time, and direct apprehension or even fear of the parent upon reunion (Van Ijzendoorn, Schuengel, & Bakermans-Kranenberg, 1999).

### **Attachment Theory in Adult Romantic Relationships**

Since the proposal of attachment theory, researchers have expanded this theory to understand interpersonal partner relationships. Attachment theory has usefulness in determining one's ability to regulate romantic functioning, cope with stress, and self-regulate emotions in a broader context of human relationships. Hazan and Shaver (1987) were among the first to propose that attachment theory could be usefully applied to romantic relationship and that a person's attachment style to their caregiver would carry over to their romantic partner. These attachment styles have shown to influence a person's affect in romantic relationships, especially in times of stress, based on the experiences with caregivers in childhood, at least theoretically (Simpson, 1990). According to Hazan and Shaver (1987) those who self-identified as being securely attached as children reported experiencing their adult romantic relationships as "happy,

friendly, and trusting.” Individuals who reported being securely attached to their primary caregivers as children, were able to trust their partners would be responsive to their needs. These individuals were comfortable giving and receiving support, and were able to successfully regulate distress. Furthermore, female partners who reported a secure attachment to a caregiver during childhood showed support seeking tendencies to their adult partners, while avoidant individuals retreated from their adult partners. Thus, couples who report secure attachment styles show higher rates of positive affect and emotion regulation during distressed times. In a similar vein, these couples tend to rate their marriage satisfaction as higher, as compared to couples that report insecure attachment styles (Simpson et al., 1992). Those who reported an insecure avoidant attachment pattern to the primary caregiver during childhood were most likely to report avoidance of closeness in their romantic relationship. Avoidant lovers were also characterized by “fear of intimacy, emotional highs and lows, and jealousy” (Hazan & Shaver, 1987, p. 515). These individuals preferred self-reliance and resorted to distancing strategies to regulate distress. Insecure ambivalent attachment is marked by high levels of distress and intense emotions in adult relationships. Ambivalent lovers reported experiencing love as an “obsession” and involving “extreme sexual attraction and jealousy.” These individuals experience uncertainty about whether their partner will be sufficiently responsive to their needs (Hazan & Shaver, 1987; Feeny, 1999; Simpson et al., 1992).

There are many parallels between parent-child attachment and romantic partner attachment (Hazan & Shaver, 1994). People tend to fall in love with people who are especially responsive to their needs, much in the same way that secure attachment to a caregiver is achieved. The threat of ending a close relationship can lead to anxiety, similar to a child experiencing anxiety when their secure base is not readily available. Despite some basic

similarities, adult attachment can differ from infant attachment. One main difference is that infant-caregiver relationships are not complementary, meaning that a child receives care and security, but does not typically provide it. On the other hand, adult attachment tends to be reciprocal, where each partner provides and receives care from their partner. Another main difference is that infant-caregiver attachment is usually physical, in the sense that a child might need the physical presence of his or her caregiver in order to feel secure. Adult attachment relies heavily on the belief that their attachment partner can be contacted if needed. In these two situations, “felt” security exists in two different forms, physical, in the case of early attachment, and assumed, in the case of adult attachment (Hazan & Shaver, 1994).

### **Limitations of Measures of Attachment Theory**

Mary Ainsworth’s SSP (Ainsworth et al., 1978) has been used to measure the attachment classification of a child to their parent. There are several limitations to be considered in using attachment theory as a means to measure emotional bonds between a primary caregiver and a child. One possible critique is that attachment theory is rooted deeply in evolutionary ideas. Attachment theory is based on the idea that the mother-child bond developed as a means of survival (Ainsworth et al., 1978). Those who were more securely attached to their caregiver were reassured that their survival needs would be met.

However, a parent-child bond consists of more than simply satisfying survival needs. There is a deep emotional connection that must also be noted (Saunders et al., 2015). Emotional connections can be noticed through affect, which is present both the caregiver and the child as a reciprocal process. When the infant smiles, the caregiver might also smile back. When the infant cries or seems distressed, the mother might also show signs of distress in his or her facial expressions (Gunnar et al., 1996). The SSP measures attachment through a series of separations

and reunions in an unfamiliar, and progressively stressful, setting. There is no measure of positive exchanges of attachment. The wide range of emotions associated with caregiver-child responses are seen in a variety of contexts, not simply in stressful contexts (Biringen & Easterbrooks, 2012).

### **Emotional Availability**

While attachment theory emphasizes the importance of maternal sensitivity and forming a secure maternal attachment, Emotional Availability (EA) describes the quality of parents-child interactions through four parental dimension (sensitivity, structuring, non-intrusiveness, and non-hostility) and two child dimensions (responsiveness to parent and involvement of parent) (Biringen, 2000; Biringen et al., 2014). These six dimensions are helpful in measuring how connected a parent is to a child and vice versa. The observational Emotional Availability (EA) Scales is a tool used to take the emotional “temperature” of a relationship between children and their caregiver. This research has been instrumental in the assessment of relationships from both the adult and the child’s views. Mahler, Pine, and Bergman (1975) used the term “emotional availability” to describe supportive maternal presence during a child’s developmental growth towards autonomy. In this sense, a mother’s emotional signaling of encouragement serve as the child’s secure base and aids in the child’s exploration. Furthermore, Emde and Easterbrooks (1985) theorized that emotional availability is not only physical presence, but emotional presence as well. Therefore, being aware and responsive to a wide range of emotions is an important aspect of emotional availability.

There are several parallels between attachment theory and emotional availability. However, emotional availability emphasizes the role of emotions in parents-child relationships, while constructs of maternal sensitivity in attachment theory do not (Biringen, 2000). Biringen

and Robinson (1991) described the importance of maternal (sensitivity, structuring, nonintrusiveness, and nonhostility) as well as child qualities (responsiveness and involvement) for understanding parent-child relationships. Parent and child EA Scales are an extremely accurate calibration of the quality and quantity of emotional connection in between a parent and a child (Biringen, 2009). Therefore, emotional availability takes into account a full range of emotions (both positive and negative) and information about what the child may need or not need (Biringen, 2014; Biringen, 2009). Furthermore, EA takes into account the emotional feedback that the child provides the caregiver. In a mutual emotional available relationship, the child also provides information about what they need, what they are feeling, and if the parent's presence is being appreciated (Biringen et al., 2014).

The EA Scales have been used in a large body of research to examine caregiver-child relationships, in approximately 30 different countries, and including all US subcultures. EA is considered to be a universal language of love because even though people are separated by cultural differences, one thing remains true: healthy emotional connections are important and are predictors of good outcomes in relationships (Biringen, 2009). Further, this measure has been applied to varied caregiver-child relationships, including newborn baby-mother, older baby-mother, child-father, child-childcare professional, and therapist-patient (Biringen et al., 2014; Biringen 2009).

While emotional availability in the parent-child relationship is important for children to form a stable sense of security in navigating the world, the current study focuses on applying those same principles of emotional availability to other relationships, such as peer-peer or romantic relationships, thought of as "equal partners". Currently, no such measure of emotional

availability for equal partners exists. This study will focus on validating the EA- AIRQ to understand such relationships.

### **Other Measures of Adult Romantic Relationships**

Close interpersonal relationships are an important aspect of society. In the United States alone there were roughly 2 million marriages in 2014 (“National Marriage Rate,” 2015). This does not include unmarried couples in a committed relationship or cohabitating couples. While it has been a constant trend in the United States for most people to marry at some point in their lives, overall relationship satisfaction has been decreasing over the last couple of years in married couples (Fowers, Montel, & Olson, 1996). Stable and satisfying relationships have been linked to promote overall health and well-being (Baumesiter & Leary, 1995). Therefore, an argument can be made for the importance of studying factors that create satisfying relationships. For this reason, we want to validate the EA-AIRQ against other related measures of couple attachment and emotional connection. However, factors that contribute or measure elements of a couple relationships are complex. Regardless of the overwhelming literature measuring relationship satisfaction, there is general support that relationship satisfaction is related to positive behaviors such as acceptance, recognition, and compromise (Feeny 2002; Gill et al., 1999; Smith, Vivian, & O’Leary, 1990).

As we have seen above, measures of attachment, as they apply to adult romantic relationships, are just one facet of measuring relationship bonds. Several studies examine concepts that yield different information on couple’s relational patterns, but holistically, these measures tend to be associated with one another. This study will look at relationship bonds through five different measures: two that focus on attachment, and three that focus on mental health/well being.

## **Evaluation of Attachment**

Hazan and Shaver (1987) developed the Adult Attachment Scale (AAS), a 3-item self-report questionnaire that is based on a person's attachment style to their primary caregiver from infancy (secure, avoidant, or anxious). This measure of attachment provides an overall explanation of individual differences in perception of relationship quality and relationship behaviors based on attachment from infancy (Feeny, 2002). However, it has also been suggested that attachment patterns in a relationship might be better studied in terms of dimensions, such as comfort, closeness, and anxiety over relationships (Feeny 2002; Brennan, Clark, & Shaver 1998, Feeny 1999).

Much of the previous research on attachment views the attachment working models in a trait-like fashion, which assesses a person's attachment in close relationships in general, rather than focusing on a specific relationship (Fraley et al., 2011). The ECR-RS (Experiences in Close Relationships- Relationship Structure Questionnaire) was designed to assess attachment-related anxiety and avoidance with four different types of relationships: mother, father, romantic partner, and friends. This measure views romantic attachment as well as basic aspects of relationship functioning, such as satisfaction, commitment, and investment. It also takes into account a person's social context (mother, father, partner, and friends) rather than just focusing on a general trait-like attachment (Fraley et al., 2011).

## **Mental Health/Well being**

Attachment and emotional availability have ties to several constructs that pertain to mental health. We have decided to highlight a few aspects of mental health that might be associated with adult attachment, given that there is no current corpus of research on adult-to-

adult emotional availability. These constructs include adult anxiety, depression, and emotional well-being.

Previous research has found several links between depression, anxiety, and attachment. Bowlby (1973) suggested that the loss of a secure attachment in early life (infancy, childhood, or adolescence) can contribute to the development of later depression and/or anxiety. The “loss” that Bowlby refers to includes either a physical separation/death, or an inability to form a secure attachment with a caregiver. This loss can encourage a pessimistic and hopeless representation of the world. The individual may develop feelings of abandonment, and powerlessness in terms of gaining support and love from their caregiver. According to Bowlby (1973), the lack of responsiveness and abandonment of a caregiver can result in attachment insecurities, that can transform into anxiety/depression disorders. In such cases, the attachment system has failed to accomplish its basic protective function, which can leave the individual feelings unsafe and alone in navigating the world. Mulinker and Shaver have studied over 200 studies that look at associations between adult attachment and affective disorders. For both clinical and nonclinical samples, they have found that, in general, secure attachment to parents and peers, secure states of mind with regards to attachment, and the endorsement of secure attachment style in close relationships is associated with lower levels of anxiety and depression. Furthermore, the avoidant individuals experience higher levels of anxiety and depression (Mikulincer & Shaver, 2007).

Anxiety plays a large role in adult romantic attachment, and has been studied in terms of how a person’s daily perception of interactive patterns can alter how they view their partner on a daily basis (Taylor, 1953; Campbell et al., 2005). In other words, to what degree does an individual worry about their partner leaving or rejecting them based on daily interaction patterns? Research has also made a connection between high anxiety and depression. A study of



freshman college students found that high levels of anxiety produced feelings of loneliness and subsequent depression (Wei, Russell & Zakalik, 2005; Radloff, 1977). An individual's attachment style can guide their general regulatory strategies, which in turn, affects how that person views others and their environmental context (Bowlby, 2008; Simmons et al., 2009). Therefore, secure attachments should influence a person's individual psychological states with respect to how high or low they rate hopefulness of their current environment.

The effects of insecure attachment status on an individual's interaction with their social contexts, such as work, are outlined by Hazan and Shaver (1990). This study found that insecure attachment status leads to lower self-esteem and less optimism, which in turn can adversely affect social adjustment. Previous literature has shown that secure attachment enhances an individual's sense of self, internal locus of control, and optimism (Fass & Tubman, 2002).

While there is a large foundation of research to study links between mental health and attachment, to our knowledge, the only application of emotional availability to adult relationships has been an observational study that focuses on therapist-to-client interaction (Soderberg, Elfors, Holmqvist Larsson, Falkenstrom, & Holmqvist, 2013). As such, we have linked the adult relationships literature with the adult attachment literature. We predict that emotional availability in a close relationship, as measured by the EA-AIRQ will be linked in expectable ways with the constructs under study. Along with the five measures described above, college students completed the EA-AIRQ. We will explore both reliability and validity in the current study.

## METHODS

### Participants and Procedures

Participants included 215 online Amazon Mechanical Turk workers from anywhere in the United States (121 men; 83 women; 11 other/unspecified; Age of participants ranged between 25-34. The ethnic breakdown of the participants was 60.5% White American, 7% Black or African American, 5.6% American Indian or Alaskan Native, 14.5% Asian American, and 12.1% other. Data were randomly collected from voluntary participants who agreed to participate in taking a questionnaire regarding self-reported perspectives on their own romantic relationships and peer relationships. The questionnaires were represented as an online survey and Mechanical Turk workers received 75 cents compensation for completing the questionnaires. Completion time for the questionnaire packet ranged from 15-25 minutes. Consent was requested and voluntary participation was emphasized. In order to maintain the privacy of the participants, no personally identifiable information was asked of participants. At the end of the survey, all participants received a list of mental health and emergency resources. Participants also had the option of discontinuing the study at any time.

Post hoc power analysis was conducted using GPower (Faul, Erdfelder, Buchner, & Lang, 2009). The sample size of 215 was used for the statistical power analysis. The alpha level used for this analysis was  $p < .05$ . The post hoc analysis revealed the statistical power for this study was 1.00 for detecting large effects ( $d = 0.5$ ), thus, this was more than adequate power (desired power .80 or above).

## Measures

All the measures used to validate the EA Adult Interpersonal Relationships Questionnaire have been derived from the literature, and all have demonstrated acceptable reliability and validity. Participants were also asked questions regarding their age, sex, education, ethnicity, and relationship status.

### *Emotional Availability*

The Emotional Availability of Adult Interpersonal Relationships Questionnaire (EA-AIRQ) is a 16-item self report questionnaire used to measure emotional security between two people. The EA-AIRQ was developed using feedback from several researchers who are familiar with previous research on parent-child emotional availability, as well as attachment theory. Responses were given on Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). The EA-AIRQ is used to rate the *perceived* emotional availability of an outside “target” person to the individual completing the questionnaire. This can include any type of approximately equal partnerships, including, but not limited to, adult romantic relationships, adult peer-peer relationships, adult colleague-colleague relationships, etc. Sample questions include, “This individual listens to me when I talk to him/her and seems interested,” and “This individual respects my thoughts and decisions, even if s/he does not agree with them.”

Higher scores on the scale indicate that the relationship is making the individual feel emotionally secure. The EA-AIRQ must be completed for one individual in a relationship, and then a second assessment can be completed for the second individual in the relationship, serially. Participants were asked to take the questionnaire twice: once thinking of a past or current romantic partner and once thinking of a “good friend.” They were then asked to read each

question carefully and mark the response they believed best represented their feelings of the partner and peer of their choosing.

### *Adult Attachment Style*

Hazan and Shaver's (1987) Adult Attachment Scale (AAS) is a 3-item self-report questionnaire that is based on a person's attachment style to their current or past romantic partners (secure, avoidant, or anxious) (Hazan & Shaver, 1990). Each item pertained to an individual's feeling in romantic love experiences. Participants were asked to read each description carefully and then place a checkmark next to the single description that best described their feelings in romantic relationships. This measure has moderate test-retest reliability ranging from a few weeks to four years (Brennan & Shaver, 1995; Kirkpatrick & Hazan, 1994). The three single-item rating scales have test-retest stabilities of approximately .60. This simple measure of attachment has generated evidence supporting its construct validity, including associations with attachment-related behavior (Levy, Blatt, & Shaver, 1998; Simpson, Roles, and Nelligan, 1992).

### *Attachment Based Anxiety and Avoidance*

The Experiences in Close Relationships-Relationship Structures Questionnaire (ECR-RS; Fraley et al., 2011) was assesses attachment-related anxiety and avoidance in four kinds of relationships: mother, father, romantic partners, and friends. The ECR-RS is a 9-item self-report questionnaire in each of those four domains, producing 36 total items. Participants responded to each item using a Likert scale ranging from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*). The test-retest reliability (over 30 days) of the individual scales are .65 for the domain of romantic relationships and .80 in the parental domain. The scales have also proven to be meaningfully related to various relational outcomes, such as relationship satisfaction, likelihood of

experiencing a breakup, the perception of emotional expressions, as well as to one another (Fraley et al., 2006).

### *Well Being*

The Flourishing Scale (Diener et al., 2010) is an 8-item questionnaire designed to measure social-psychological prosperity and important aspects of human functioning. These include having supportive and rewarding relationships, contributing to the happiness of others, perceived self-competence, and having a purposeful and meaningful life. The items included tap into a person's self-respect and optimism. Well-being is assessed using a Likert scale ranging from 1 (*Strong disagreement with all items*) to 7 (*Strong Agreement with all items*). This scale does not provide separate measures of facets of well-being, but it does provide an overall score of positive functioning across various domains. The Flourishing Scale has been shown to be correlated with other validated measures of well-being. Research has shown a Cronbach's alpha of .87 and construct validity of .62 (Diener et al., 2010).

### *Anxiety Symptomatology*

Anxiety was measured using the Generalized Anxiety Disorder-7 item Scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD-7 is a seven-item questionnaire that is used to measure the frequency and severity of symptoms of Generalized Anxiety Disorder using the DSM-IV criteria over the last two weeks. Each item is assessed on a Likert scale ranging from 0 (*Not at all sure*) to 3 (*Nearly every day*). The GAD-7 has been validated as an overall measure of anxiety for the general population. It has shown excellent internal consistency with a Cronbach's alpha of .92 and good test-retest reliability with an intraclass correlation of .83. The GAD-7 has also proved to have good convergent validity with other measures of anxiety (Spitzer, Kroenke, Williams, & Löwe, 2006).

### *Depression Symptomatology*

The Patient Health Questionnaire-9 item scale (Kroenke, Spitzer, & Williams, 2001) is a nine-item questionnaire designed to measure symptoms of depression based on the DSM-IV criteria for depression over the last two weeks. The items are assessed on Likert scale ranging from 0 (*Not at All*) to 3 (*Nearly Every Day*). The two items measuring depression consist of two diagnostic core criteria for depressive disorders, while the other two items consist of core criteria for generalized anxiety disorder. The PHQ- showed good internal consistency with a Cronbach's alpha of .89. The PHQ-9 also showed strong associations with other measures of mental health (.79) (Kroenke, Spitzer, & Williams, 2001).

### **Plan of Analysis**

We composited EA-AIRQ in two ways, one unweighted composite (sum of all items) and the other a weighted composite, to arrive at a one factor solution. It was expected that the EA-AIRQ composites (unweighted and weighted) would be positively correlated with measures of well being and significantly correlated with secure adult attachment. In terms of divergent validity, it was expected that the EA-AIRQ would be negatively correlated with measures of depression, anxiety, attachment based anxiety and avoidance, and insecure (avoidant/ambivalent) attachment. Although we were unable to do test-retest reliability, Cronbach's alpha and split half reliability were analyzed to understand the reliability of this self-report measure.

## RESULTS

### Reliability

Cronbach's alpha for the EA-AIRQ for peers and romantic partners was assessed. For the peer scale, the coefficient was .91, ranging from .89 to .91, which indicates very good internal consistency reliability. For the romantic partner scale, the coefficient was .93, ranging from .92 to .93, which also indicates very good internal consistency reliability.

To calculate split half reliability, the EA-AIRQ was divided into even and odd numbered questions, for both the peer and the romantic partner measures. Split-reliability coefficient for the peer scale was .83 ( $p < .01$ ), and for the romantic partner scale .88 ( $p < .01$ ). These results are indicative of good internal consistency.

### Preliminary Analyses

Pearson's correlations were conducted between each of the demographic variables and the study measures. Results showed a significant correlation between the number of hours worked per week and EA for both peer ( $r = -.17, p < .05$ ) and romantic partner questionnaires ( $r = -.14, p < .05$ ), indicating that the more hours a participant spends at work is associated with lowers EA scores. Significant positive correlations were found between household income before taxes and EA for both peer ( $r = .18, p < .01$ ) and romantic partners ( $r = .15, p < .05$ ), which indicates that higher household income is correlated with higher scores of EA. The length of time that a participant has known their romantic partner was also significantly associated with higher levels of EA for the romantic partner questionnaire ( $r = .23, p < .01$ ). Likewise, the longer a participant has known their chosen peer was significantly associated with higher levels of EA for the peer questionnaire ( $r = .40, p < .01$ ). There were not significant correlations between EA scores and age and highest level of completed education.

## **Construct Validity of EA-AIRQ**

To examine construct validity of the EA-AIRQ, we examined two approaches: one with simple (unit-weighted) adding of items together and another with use of factor analysis that allowed for variable weighting of items. We wanted to keep in mind that the main purpose of the development of the EA-AIRQ was to be used as a brief, self-reported measure of general emotional availability in adult-adult relationships that might related to other relevant measures of emotional well-being and might be used in research, clinical, or personal settings. Therefore, we sought to create one composite of emotional availability, one unit-weighted (equal weights) obtained by summing all 16 items and the second regression weighted by obtaining a one-factor solution.

### **Unit-weighted Composites**

#### *Associations with Measures of Adult Attachment*

The hypothesis that EA of adult interpersonal relationships would be significantly correlated with various measures of attachment patterns was confirmed. Table 1 present the Pearson's correlations coefficients and significance levels that were calculated to examine this hypothesis. Scores from both the romantic partner and good friend were analyzed. It was found that the EA-AIRQ measure for romantic partners was highly negatively correlated with the ECR-RS (Fraley et al., 2011) composite scores for attachment-related anxiety ( $r = -.73, p < .01$ ) and avoidance ( $r = -.83, p < .01$ ). The EA-AIRQ measure for good friends was also highly negatively correlated with the ECR-RS composite scores for friend attachment-related anxiety ( $r = -.67, p < .01$ ) and avoidance ( $r = -.65, p < .01$ ).

Correlations between the EA-AIRQ measure for romantic partners and the ECR-RS for good friends was also analyzed and found to be moderately correlated (anxiety  $r = -.52, p < .01$ ;



avoidance  $r = -.38, p < .01$ ). Likewise, the EA-AIRQ measure for good friends also showed a moderate-high correlated with the ECR-RS composite scores for romantic partners (anxiety  $r = -.56, p < .01$ ; avoidance  $r = -.46, p < .01$ ).

A one-way ANOVA was used to examine significant differences between EA-AIRQ measures of romantic relationships and the Adult Attachment Questionnaire (Hazan & Shaver, 1987). As expected, results showed a significant difference in scores on the EA-AIRQ between self-reported avoidant and securely attachment participants, with avoidant participants reporting lower EA-AIRQ scores ( $p < .01$ ). There were also significant differences in EA-AIRQ scores between anxiously attached participants and securely attached participants ( $p = .02$ ), with securely attached participants reporting higher scores on the EA-AIRQ for romantic partners. While both self-reported avoidant and ambivalent-attached participants had significantly lower scores on the EA-AIRQ, those with ambivalent attachment did score higher than those with avoidant attachment, although not significantly higher.

#### *Associations with Measures of Mental Health and Well Being*

Construct validity of this brief questionnaire was investigated using correlations between the EA-AIRQ unweighted composite scores and relevant measure of well being (Flourishing Scale; Diener et al., 2010) and mental health (PHQ-9; Kroenke, Spitzer, & Williams, 2001; GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006). As hypothesized, the EA-AIRQ showed significant correlations with the Flourishing Scale, a measure of well-being (Diener et al., 2010). Pearson's correlations were calculated for both peer and romantic partner scales. Results showed moderate correlations between the EA-AIRQ for peers and the Flourishing Scale ( $r = .43, p < .01$ ). Moderate correlations between the EA-AIRQ for romantic partners and the Flourishing

Scale was also found ( $r = .42, p < .01$ ). Both coefficients showed that higher scores on the EA-AIRQ resulted in the higher scores on Flourishing.

Similarly, the EA-AIRQ showed significant negative correlations with both the Generalized Anxiety Disorder 7-item Scale (GAD-7) and the Patient Health Questionnaire (PHQ-9). Pearson's correlations were calculated for both the peer and the romantic partner results. The GAD-7 showed negative moderate correlations with the EA-AIRQ peer scale ( $r = -.40, p < .01$ ) as well as the romantic partner scale ( $r = -.42, p < .01$ ). The PHQ-9 also showed negative moderate correlations with the EA-AIRQ peer scale ( $r = -.40, p < .01$ ) as well as the romantic partner scale ( $r = -.45, p < .01$ ). These results were in line with our previous hypothesis.

### **Sex Differences**

An independent samples t-test was conducted to compare differences in scores on the EA-AIRQ for romantic partners between males and females for the. Significant differences were found in the scores for males ( $M = 74.6, SD = 18.87$ ) and females ( $M = 83.49, SD = 20.21$ );  $t(200) = -3.19, p = .002$ . Results indicate that women scored significantly higher on the EA-AIRQ for romantic partners. When analyzing sex differences in the EA-AIRQ scores of the peer scale, results of a Lavene's test showed that equal variances could not be assumed ( $p = .048$ ). Significant differences were also found in the scores for males ( $M = 78.24, SD = 16.59$ ) and females ( $M = 88.39, SD = 14.88$ );  $t(185.81) = -4.54, p < .01$ . Women also scored significantly higher on the EA-AIRQ peer scale than males.

### **Regression-weighted Composites**

SPSS version 24.0 was used to conduct a factor analysis with principal components extraction and varimax rotation; we selected a one-factor solution. This method was used as a weighted data reduction strategy for the 'peer' scores; the same strategy was used for the

romantic partners. As can be seen in Table 2, which displays the factor loadings for both the peer and romantic partner EA questionnaires, all factor loadings were greater than .30 and therefore included in our understanding of that factor. Next, we ran correlations between the one factor for peers with the other five measures in the current study. These results indicated the same pattern as above. Finally, we ran correlations between this one factor for romantic partners with the other five measures in the current study. These results indicated the same pattern as above.

## DISCUSSION

This paper describes a pilot study to explore the reliability and validity of a new and brief questionnaire to measure the emotional availability in adult interpersonal relationships. The questionnaire consists of 16 items, measuring various aspects of emotional availability. Previous research on emotional availability between parent-child interactions measures emotional availability using six different domains (sensitivity, structuring, non-intrusiveness, non-hostility, child's responsiveness to caregiver, and child's involvement of caregiver). As of now, the emotional availability scales measure caregiver-child interactions and consist of six different domains. Emotional availability refers to the capacity of a dyad to share an emotionally health relationships (Biringen, 2014). The purpose of this study was not to replicate the six original constructs of a caregiver-child dyad, but to create an entirely new, brief, questionnaire that can easily be used to measure emotional availability of adult interpersonal relationships in research or clinical practice. Overall, analysis of data presented show that the EA-AIRQ is valid and has excellent reliability.

Results indicated that, as hypothesized, Emotional Availability of Adult Interpersonal Relationships (EA-AIRQ) was significantly correlated with measures of attachment-related anxiety and avoidance (ECR-RS; Fraley et al., 2011). Results indicated negative correlations for both peer and romantic partner questionnaires. In general, participants with higher emotional availability with peer and romantic partners had lower attachment related anxiety and avoidance. This relationship was expected since those who are more emotionally available and perceive higher quality of relationships should feel less symptoms of anxiety and avoidance around people close to them.

Internal consistency and split half reliability were excellent for the EA-AIRQ in both peer-peer relationships as well as romantic partnerships. A goal of this measure is to achieve applicability to a wide range of interpersonal relationships, including any relationships where both parties consider themselves to be hierarchically equal. Further research will continue to explore the differences between various types of adult interpersonal and emotionally close relationships.

Results of a one-way ANOVA indicated significant differences between EA-AIRQ scores and self-reported attachment styles. Significant differences in EA scores for romantic partners were found between secure and avoidant attachment participants, and secure and ambivalent attachment participants. Again, it is expected that people who self-identified as “insecurely” attached would also show lower emotional availability to romantic partners.

Results also indicated that having higher levels of emotional availability is linked to psychological well-being. As expected, higher scores on the EA-AIRQ for both peers and romantic partners were significantly correlated with indicators of well being, and negatively correlated with anxiety and depression. This shows that perceiving positive and emotionally supportive peer and romantic partner relationships might serve as a buffer to depression and anxiety. In the development of the EA-AIRQ, it is our hope that it can help initiate further research that explores the relationship between emotional availability and other aspects of mental health. This can have many implications in research, and also in clinical therapeutic settings.

### **Clinical Applications**

One main objective for this questionnaire is to explore its usefulness in therapeutic settings, such as couple therapy. Our hope is that the EA-AIRQ can be used as a brief and rigorous measurement of emotional availability for therapists using attachment focused therapeutic theories. Two therapeutic theories that use tenets from attachment theory are

Emotionally Focused Therapy (EFT) and Psychobiological Approach to Couple Therapy (PACT) (Johnson, 2004; Solomon & Tatkin, 2011). Emotionally Focused Therapy uses systems theory to explore attachment behaviors, such as proximity maintenance, the use of a partner as a “safe haven”, and also looks at patterns of separation distress, also known as the negative interaction cycle. EFT developed alongside the research on adult attachment and uses this framework to guide therapists to explore the couple connection. With over 20 years of empirical research, EFT is one of few empirically validated couples therapies (Johnson, 2004). Similarly, PACT uses an attachment perspective to focus on arousal regulation. PACT holds that assumption that people mainly function using their “primitive” brain in romantic relationships and conflict, which is the non-verbal, emotion-driven, implicit part of the brain. The focus of PACT is not on two people’s psychologies interacting, but rather two nervous systems interacting with one another. Using this framework, it becomes crucial to examine how attachment insecurities can affect a person’s connection with their partner, with the goal being that each partner can serve as a catalyst for emotional and physiological regulation, especially in times of stress (Solomon & Tatkin, 2011). Because the EA-AIRQ measures the perceived level of emotional availability of the individual’s partner, it is our hope that it may be used in clinical settings that are grounded in attachment theory, in addition to any other situations that a therapist may see fit. The EA-AIRQ can be a tool for identifying strengths and weaknesses for emotionally available partners and could help identify areas that the couple may want to focus on.

## LIMITATIONS AND FUTURE DIRECTION

The development of this scale is to provide individual adults with information regarding the “emotional climate” of their adult equal-partner relationships. A benefit of this scale is that it functions not only with romantic partners, but also with peer relationships. In this specific example, participants were asked to think of a “good friend” as well as a current or previous romantic partner. The specific aim of the study was to create a scale that measures the emotional availability of two equal adults. This claim implies that any two adults (e.g. peer-peer, colleague-colleague, romantic partner-romantic partner) should be able to use the measure. However, as human beings, we know that there are a several complexities to relationships, which can be altered based on the context. A further area of research would be to examine how the EA-AIRQ scale holds up to several different types of relationships. For example, it is appropriate for both romantic relationships and good friend/peer relationships to have an expectation of being emotionally available with each other. However, the same might not be true for work colleagues or acquaintances, who would be considered “equals” but not necessarily emotionally available. In addition, further research will explore whether or not emotional availability looks different in an environment that is primarily professional and task-driven.

A very apparent limitation to the study is that, given that it is a voluntary response sample, participants who self-selected themselves to participate may not reflect the views of the population as a whole, which means generalizability cannot be assumed. It can be assumed that participants in this study have access to a working computer, basic knowledge of how to navigate the internet, speak English, and may have been interested in topics regarding relationship satisfaction.

Similarly, all information gathered was self-reported by participants from memory. Participants were asked to think of a good friend and a previous or current romantic partner. Because of the subjective nature of the measure, there is no feasible way to have each participant's account on their relationship independently verified. Additionally, participants were asked to think of *either* a current romantic partner or a past romantic partner. If participants chose the latter, it is possible that their perspective of the relationship may be skewed or altered by the fact that the relationship was terminated. This could lead to either selective memory of negative memories of the relationship or exaggeration.

Another potential limitation of the study is the lack of a counterbalanced measures design. All participants were asked to first complete the EA-AIRQ and the ECR-RS questionnaires while thinking of a "good friend" and then immediately after, they were instructed to retake the questionnaires while thinking of a "romantic partner." Further exploration will examine whether the order in which participants complete the questionnaires will influence their perception of emotional availability in the relationships.

In future research, cultural implications could be further explored. The majority of the population self-reported as being primarily White American (60.5%). Emotional Availability, as a parent-child construct, has been known to be the universal language of love, as it is applicable across several languages and cultures all around the world (Biringen 2009). However, further research can explore if this holds true for a measure of emotional availability outside of the parent-child construct.

Future work with this questionnaire will also include further exploratory factor analysis. Although all 16 questions on the EA-AIRQ loaded strongly using a one-factor analysis, there may be multifactors within the one-factor solution that may be differentially predictive of



outcomes. This may beg the question whether or not it there should be several different scales that would better fit various relationship dynamics, rather than just one universal scale. For example, would a scale that works with peer-peer relationship dynamics look the same as a scale that might be used in workplace settings? Although there is usefulness in just having one universal scale, further research will continue to explore the most effective EA measure of various relationship dynamics.

Due to the nature of relationship complexity, there is no umbrella definition of a functioning relationship, for peer or romantic partners. This adds several dynamics of relationships that may not be accounted for in our measure of emotional availability. One aspect of relationship that may differ from person to person is the different dynamics that make up different relationships. It may hold true that in a relationship, specifically a romantic relationship, partners may not see each other as “equal.” In some relationships, this is discussed and agreed upon and in others, this might be indicative of power and control struggles within the relationship. Future studies might focus on differences in emotional availability within abusive relationships and explore how an EA measure can be useful within therapeutic settings.

**Table 1***Descriptive Statistics for and Correlations between EA-AIRQ, ECR-RS, Flourishing Scale, GAD, and PHQ*

	1	2	3	4	5	6	7	8	9
1. EA Romantic Partner Score	X								
2. EA Peer Score	.60*	X							
3. ECR-RS Romantic Partner Avoidance	-.83**	-.46**	X						
4. ECR-RS Romantic Partner Anxiety	-.73**	-.56**	.613**	X					
5. ECR-RS Peer Avoidance	-.38**	-.65**	.36**	.35**	X				
6. ECR-RS Peer Anxiety	-.52**	-.67**	.41**	.71**	.47**	X			
7. The Flourishing Scale	-.42**	-.43**	.44**	.40**	.37**	.38**	X		
8. GAD	-.42**	-.40**	.30**	.55**	.26**	.56**	.48**	X	
9. PHQ	-.45**	-.40**	.35**	.57**	.27**	.55**	.52**	.90**	X
<i>M</i>	78.38	82.35	2.75	3.00	2.85	3.27	21.53	12.91	12.90
<i>SD</i>	19.80	16.62	1.01	1.68	1.34	1.86	10.02	5.59	5.43

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .0001$

**Table 2**

*Summaries of Exploratory Factor Analysis Results for Emotional Availability for Adult Interpersonal Relationships (EA-AIRQ) Estimation (N = 213)*

Item	One-factor solution	
	Peers	Romantic Partners
1. This individual genuinely listens to me when I talk to him/her and seems interested.	<b>-.70</b>	<b>.77</b>
2. My day-to-day life seems to matter to this individual.	<b>-.61</b>	<b>.75</b>
3. This individual purposefully tries to get my attention or control me with the use of distress or withdrawal.	<b>.62</b>	<b>-.66</b>
4. This individual seems to need a lot of reassurance of my caring and attention.	<b>.60</b>	<b>-.35</b>
5. This individual respects my thoughts and decisions, even if s/he does not agree with them.	<b>-.62</b>	<b>.70</b>
6. This individual does not talk to me or involves me little in what is going on in his/her life on a daily basis.	<b>-.62</b>	<b>.66</b>
7. This individual does not talk to me or involves me little in his/her life on a daily basis.	<b>.72</b>	<b>-.77</b>
8. This individual seems to care about what is happening with me on a daily basis.	<b>-.55</b>	<b>.71</b>
9. This individual does not include me in important events or decisions.	<b>.69</b>	<b>-.77</b>
10. When I am with this individual and/or try to relate to him/her about what matters to me, s/he seems disinterested.	<b>.68</b>	<b>-.71</b>
11. I am concerned that this individual is lying to me, telling me partial truths, or playing "mind games."	<b>.74</b>	<b>-.80</b>
12. I feel criticized, belittled, or mocked by this individual.	<b>.79</b>	<b>-.72</b>
13. This individual is able to offer me feedback without sounding critical.	<b>-.45</b>	<b>.68</b>
14. This individual helps me work towards my goals and/or positively challenges me toward personal growth.	<b>-.64</b>	<b>.76</b>
15. I often feel like I don't have a say in decisions that would affect both of us.	<b>.72</b>	<b>-.66</b>
16. This individual is able to meet my emotional needs for this relationship.	<b>-.63</b>	<b>.77</b>
% of variance	42.75	50.34

*Note:* Factor loadings over .30 appear in bold.

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## APPENDIX A

### EMOTIONAL AVAILABILITY (EA) FOR ADULT INTERPERSONAL RELATIONSHIPS

**QUESTIONNAIRE:** Please complete this form thinking  
of a best friend in your life as the individual and then  
complete it about a romantic partner

	Strongly Disagree			Strongly Agree	
1. This individual genuinely listens to me when I talk to him/her and seems interested.	1	2	3	4	5
2. My day-to-day life seems to matter to this individual.	1	2	3	4	5
3. This individual purposefully tries to get my attention or control me with use of distress or withdrawal.	1	2	3	4	5
4. This individual seems to need a lot of assurances and reassurances of my caring and attention.	1	2	3	4	5
5. This individual respects my thoughts and decisions, even if s/he does not agree with them.	1	2	3	4	5
6. This individual seems happy or in a good mood around me.	1	2	3	4	5
7. This individual does not talk to me or involves me little in what is going on in his/her life on a daily basis.	1	2	3	4	5
8. This individual seems to care about what is happening with me on a daily basis.	1	2	3	4	5
9. This individual does not include me in important events or decisions.	1	2	3	4	5
10. When I am with this individual and/or try to relate to him/her about what matters to me, s/he seems disinterested.	1	2	3	4	5
11. I am concerned that this individual is lying to me, telling me partial truths, or playing "mind games".	1	2	3	4	5
12. I feel criticized, belittled, or mocked by this individual.	1	2	3	4	5
13. This individual is able to offer me feedback without sounding critical.	1	2	3	4	5
14. This individual helps me work towards my goals and/or positively challenges me towards personal growth.	1	2	3	4	5
15. I often feel like I don't have a say in decisions that would affect both of us.	1	2	3	4	5
16. This individual is able to meet my emotional needs for this relationship.	1	2	3	4	5