

Running head: ATTACHMENT AND AMAE

Attachment and *Amae* in Japanese Romantic Relationships

Tara C. Marshall

Brunel University

Please address correspondence to Tara C. Marshall, Department of Psychology, School of Social Sciences, Brunel University, Uxbridge, Middlesex, United Kingdom, UB8 3PH.

Email: tara.marshall@brunel.ac.uk. Phone: 011-44-(0)1895-267096.

Word count: 7,999

Abstract

Amae is a Japanese term that refers to an individual's inappropriate behavior when he/she presumes indulgence from a significant other. The link between attachment style and *amae* has been debated, but few studies have examined this link empirically. This study examined the association of attachment style with *amae* behavior in Japanese dating couples over a two-week period. Results showed that for Japanese men, anxious attachment was positively associated with their *amae* behavior, and in turn, with their increased relationship quality. Conversely, avoidant attachment was negatively associated with their *amae* behavior, and in turn, with their decreased relationship quality.

Keywords: *amae*, attachment, culture, Japan, relationships, romantic

Attachment and *Amae* in Japanese Romantic Relationships

Imagine the following scenario involving a wife and husband, Hiroko and Nobu. After a long day at work, Hiroko is particularly tired and does not relish the prospect of a 20-minute walk home. She phones Nobu and asks him to pick her up, even though she is aware that Nobu has had a long work day too, and it is inconvenient for him to drive over to her office in the middle of busy traffic. Nonetheless, she asks because she expects that he will say yes, and sure enough, he agrees. For his part, Nobu does not feel annoyed at this inconvenience, but rather feels pleased that Hiroko needs him, and that asking him for this favor instead of a colleague or friend affirms the closeness and specialness of their relationship.

Hiroko and Nobu's interaction may be interpreted as reflecting *amae* – a Japanese word that encompasses the feelings and behaviors associated with making an inappropriate request of another person and expecting indulgence, understanding, and acceptance in return (Behrens, 2004; Yamaguchi, 2004). Although there is no one word in English that is the equivalent, some English translations have defined *amae* as acting spoiled, sulky, pampered, playful, or babyish (Johnson, 1993; Taketomo, 1986) – words with negative connotations. Japanese meanings, although multiple, nuanced, and lacking in consensus (Behrens, 2004), allow for both positive and negative manifestations of *amae* depending on the context. In the present example, Hiroko may have requested an inconvenient favor from Nobu because the intimacy and commitment of their relationship made her feel confident that he would indulge her request. Nobu agreed because Hiroko's request signaled to him that their relationship is close, and he experienced pleasant, warm feelings and enhanced relationship quality in return.

Consistent with these interpretations, a recent study of Japanese dating couples found that amae behaviors were associated with a desire to increase intimacy, which in turn was related to greater perceived relationship quality and lower conflict (Marshall, Chuong, & Aikawa, 2011). Along related lines, Niiya, Ellsworth, and Yamaguchi (2006) found that when Japanese participants read a scenario about a friend who asked for an inconvenient favor, they perceived the friendship as closer and reported more positive affect than scenarios in which the friend did not ask for the favor. To the extent that the amae provider imputes an intimacy-enhancing motive to the amae request, he/she may feel special, valued, and needed (Maruta, 1992), and may provide amae to further cement the relationship bond. Conversely, amae providers who infer that the amae requester is driven by self-seeking, instrumental motives may feel manipulated, and reluctantly grant the favor out of obligation rather than goodwill (Behrens, 2004).

Recent work suggests that the feelings and behaviors associated with amae are also experienced in non-Japanese contexts (Niiya et al., 2006, in press), and that there are individual differences in amae behavior (Marshall et al., 2011), suggesting that not all Japanese internalize the cultural ideology of amae to the same extent (Gjerde, 2004). The current study explored the possibility that these individual differences in amae behavior are attributable to attachment style, redressing the paucity of empirical research that has explored this link (Behrens, 2004; Yamaguchi, 2004).

Individual Differences in Amae: Influence of Attachment Style

According to attachment theory (Bowlby, 1969, 1973, 1980), infants are born with a repertoire of behaviors – such as crying, smiling, cooing, and clinging – that enhance the infant’s likelihood of survival by facilitating proximity with a caregiver. The

availability of caregivers during times of need affects the infant's development of internal working models of self and others that guide affect, cognition, and interpersonal behavior into adulthood (Hazan & Shaver, 1987). If the caregiver is available, sensitive, and responsive to the infant's distress, the infant is more likely to develop a secure attachment style, characterized by positive internal working models of self and others (Bartholomew & Horowitz, 1991). Secure individuals tend to be comfortable with closeness and mutual dependency in relationships, and they are not preoccupied with fears of abandonment. Secure attachment is associated with mental health, affect regulation, social competence, and prorelationship behavior (Mikulincer & Shaver, 2007).

If a caregiver is unavailable, inconsistent, or unresponsive, an infant is more likely to develop an anxious or an avoidant attachment style. Anxious attachment develops when a caregiver's inconsistency leads to uncertainty about the availability of caregivers (Cassidy & Berlin, 1994). Anxious attachment is characterized by positive internal working models of significant others and negative models of the self (i.e., preoccupied attachment; Bartholomew & Horowitz, 1991). When a caregiver is perceived to be unavailable, people high in anxiety tend to use hyperactivating strategies to restore proximity, such as heightened monitoring for attachment figure availability and intensified efforts to obtain attention and care (Mikulincer & Shaver, 2007). Anxious individuals tend to doubt their worth to others, seek reassurance, ruminate on distressing events, and fear interpersonal rejection (Collins & Read, 1990).

Avoidant attachment, on the other hand, is characterized by negative internal working models of others and positive models of the self (dismissing avoidant), or negative models of both others and the self (fearful avoidant). Individuals who are high in

avoidance tend to be uncomfortable with closeness and are reluctant to trust or depend on others. They defensively maintain their positive self-views by suppressing threat cues and attachment-related information (Mikulincer, Dolev, & Shaver, 2004). These strategies, referred to as deactivating (Mikulincer & Shaver, 2007), serve to maintain emotional distance and self-reliance. Anxious and avoidant attachment are commonly conceptualized as two orthogonal dimensions, and secure attachment is conceptualized as low scores on both dimensions (Fraley, Waller, & Brennan, 2000).

How might attachment styles influence the tendency to request, perceive, detect, and provide amae? This question presupposes that attachment and amae are separate constructs – an issue debated among amae researchers (Behrens, 2004; Rothbaum & Kakinuma, 2004; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000; Vereijken, Riksen-Walraven, & Van Lieshout, 1997; Yamaguchi, 2004). In terms of notable similarities, both systems are triggered by stress (Rothbaum & Kakinuma, 2004), resulting in proximity-seeking behavior and emotional distress if security and closeness are not attained (Mizuta, Zahn-Waxler, Cole, & Hiruma, 1996). In terms of differences, attachment is activated by acute threats to safety or proximity with the caregiver, whereas amae tends to be triggered by milder stress, such as when children are sleepy or tired (Behrens, 2004). Amae may even be expressed in the absence of stress, particularly when one actively desires closeness or to serve one's own ends.

Furthermore, Rothbaum et al. (2000) noted that in the attachment system, the caregiver functions as a secure base from which to explore the world, whereas in the amae system, the caregiver functions to reinforce interdependence and physical proximity rather than autonomous exploration. Interdependence is valued in cultural contexts where

it is important to cultivate harmonious social interactions, such as in Japan, whereas exploration is valued in cultural contexts where it is important to be independent (Markus & Kitayama, 1991). More broadly, cultural variation in the antecedents, nature, and consequences of secure attachment led Rothbaum et al. (2000) to suggest that the attachment system may not be universal, as purported by van Ijzendoorn and Sagi (1999), but may be importantly shaped by cultural influences such as the amae system in Japan.

The position taken here is that amae behaviors function as a conduit through which the attachment system finds culture-specific expression. This begs the question of whether secure or anxious attachment is more likely to find expression in amae behavior. On the surface, there are similarities in behavior that tends to be classified as anxious-ambivalent and amae behavior (Rothbaum et al., 2000), such as being demanding, clingy, babyish, and getting angry or throwing a tantrum to capture the caregiver's attention. However, Yamaguchi (2004) reported that Japanese lay people tend to associate anxious attachment with only negative, inappropriate forms of amae, and secure attachment with positive, appropriate forms of amae. It is logical to surmise that the social competence of securely attached individuals may mean that they often request and provide amae – up to a point – in order to appropriately reinforce interdependence in close relationships.

Anxious individuals, on the other hand, may request amae with heightened intensity because their chronically-accessible attachment-related worries (Mikulincer, Birnbaum, Woddis, & Nachmias, 2000) may lead them to seek merger and reassurance from significant others. In turn, significant others may be more likely to indulge partners who frequently request amae – but only to a point. The tendency for anxious individuals to monitor the environment for attachment-related cues may also mean that they are

particularly perceptive for signs that their partner is providing and requesting amae. Avoidant individuals, on the other hand, may be less likely to request and provide amae in a bid to maintain interpersonal distance. Because avoidant individuals tend to suppress attachment-related cues, they may also fail to perceive when their partner is requesting or providing amae. In sum, it is reasonable to suggest that insecure attachment styles miscalibrate the amae system, hyperactivating or deactivating the tendency to request, perceive, detect, and provide amae.

Association of Attachment Style with Relationship Quality. Studies conducted in the West have found that attachment anxiety and avoidance are negatively associated with perceived relationship quality (e.g., Campbell, Simpson, Boldry, & Kashy, 2005). In a sample of Australian and Japanese participants, Joel, MacDonald, and Shimotomai (2011) found that anxious attachment was negatively correlated with relationship satisfaction, but the direct effect of anxious attachment on commitment was positive and significant after controlling for several indirect effects (e.g., reflected appraisals).¹

The current study conceptualized relationship quality as a composite of relationship satisfaction, commitment, and intimacy. On the one hand, anxiety might be positively related to relationship quality because it hyperactivates relationship-enhancing amae behavior. From this perspective, the positive total effect of anxiety on relationship quality would be significantly reduced once the indirect effects of amae behavior were accounted for. On the other hand, secure attachment (low anxiety, low avoidance) may better encourage appropriate amae behavior and relationship quality than unmitigated anxiety. In light of this possibility, the interactions between anxiety and avoidance were explored in this study in addition to the main effects. Because attachment and amae were

conceptualized as independent constructs, it was also predicted that people who engaged in more amae behavior would experience greater relationship quality regardless of their chronic attachment style. Conversely, to the extent that attachment avoidance reduces the likelihood of amae behavior, relationship quality should likewise be reduced. Due to the lack of empirical studies on the inter-correlations of attachment, amae, and relationship quality, it was unclear whether any direct effects of anxiety or avoidance on relationship quality would remain after controlling for amae behavior. Moreover, if such direct effects did emerge, it would be difficult to predict their direction in light of evidence that anxiety tends to be negatively related to relationship satisfaction but positively related to commitment and desire for intimacy (Joel et al., 2011; Bartz & Lydon, 2006). As such, no predictions were made for direct effects.

There was also no a priori reason to expect that gender would moderate the associations of attachment style with amae and relationship quality. However, it was logical to surmise that men and women might differ in the sheer amount of amae behavior they engaged in, considering that other studies have found that women tend to express more amae in romantic relationships than men (Ohsako & Takahashi, 1994).

Overview of the Present Study

To explore the association of attachment style with amae behavior in Japanese heterosexual relationships, data was collected from both partners every day for two weeks. The dyadic structure of this data set allowed for application of the Actor-Partner Interdependence Model (APIM; Kashy & Kenny, 2000) to examine the influence of the actor's and the partner's independent variables on the actor's dependent variables (*actor* and *partner effects*, respectively). Thus, it was possible to test the association of partner's

attachment style and amae behavior with actor's amae behavior and relationship quality. This approach is novel within the amae literature, which has focused more on amae experienced within adult friendships, and tested participants' reactions to hypothetical vignettes rather than to real-life relationship events (e.g., Niiya et al., 2006, in press). Because this study was the first to test the influence of partner's attachment style on actor's amae behavior, partner effects were examined on an exploratory basis. Thus, the following hypotheses addressed actor effects in a sample of Japanese dating couples.

Hypothesis 1. Attachment anxiety will be positively associated with requesting, receiving, detecting, and providing amae.

Hypothesis 2. Attachment avoidance will be negatively associated with requesting, receiving, detecting, and providing amae.

Hypothesis 3. Amae behaviors will be positively associated with relationship quality.

Hypothesis 4. The indirect effect of anxiety and avoidance on relationship quality will be mediated by amae behaviors.

Because of the lack of prior empirical studies that have tested the interaction of anxiety and avoidance in Japanese romantic partners, tests of these effects were considered secondary to the tests of the main effects, and were exploratory in nature.

Method

Participants

The sample consisted of 30 Japanese heterosexual couples. Participants were recruited through an advertisement on a listserv for psychology students and announcements in a psychology class at two large universities in Tokyo. Each partner

received 3000 yen for his or her participation. All participants were born in Japan and had lived exclusively in Japan their entire lives except for nine participants, who indicated that they had lived outside of Japan – almost all within the United States – for an average of 1.9 years ($SD = .88$). Men and women did not significantly differ in age ($M_s = 21.23$ and 20.63 , respectively). The average length of relationships was one year ($SD = 1.17$) and ranged from 2 months to 5 years. 77% of participants indicated that they were currently involved in a dating relationship, 16% indicated that they cohabitated with their partner, 2% were engaged, and 5% did not indicate their relationship status.

Procedure

Participants first completed an intake questionnaire that assessed chronic attachment style, demographic characteristics, and two variables (self-esteem and neuroticism) that tend to be associated with anxious attachment and were statistically controlled in all analyses. When both partners had submitted their intake questionnaires, they were given an information sheet that explained that every day for the next 14 days, beginning later that day, they would be emailed a short diary record. They were instructed to complete the survey at night before going to bed, and to email it back to the experimenter. If they forgot to complete a survey one day, they were asked to skip that day rather than to complete it by memory the following day. Participants who did not complete a daily record during the diary phase were emailed a reminder to complete their diaries on time. At the end of the 14-day period, they received 3000 yen and were fully debriefed.

Materials

The intake and diary surveys were first translated from English to Japanese. A second translator then back-translated the materials from Japanese to English, and these versions were compared with the original English version. Small changes were made to the Japanese materials to improve the fidelity of the translation while maintaining cultural appropriateness in meaning. Continuous items in the intake questionnaire were rated on a 5-point Likert scale anchored with *Strongly Disagree* (1) and *Strongly Agree* (5).

Intake Measures

Attachment. The Experiences in Close Relationships Questionnaire-Revised (ECR-R; Fraley, Waller, & Brennan, 2000) consists of 18 items that assess avoidant attachment (e.g., “I prefer not to be too close to romantic partners”) and 18 that assess anxious attachment (e.g., “I often worry that my partner will not want to stay with me”). Higher scores indicate greater avoidance and anxiety; low scores on both dimensions indicate greater security. Factor analysis revealed two clear factors that corresponded with anxious and avoidant attachment, and together accounted for 50% of the total variance. The alpha coefficient was .87 both for the anxiety dimension and for the avoidance dimension.

Self-Esteem. Eight items from the Self-Liking/Self-Competence Scale (Tafarodi & Swann, 1995) measure self-liking (e.g., “I am secure in my sense of self-worth”) and eight measure self-competence (e.g., “I perform very well at many things”). Items were summed to form a total score indexing self-esteem ($\alpha = .91$).

Neuroticism. Eight items from the Big Five Inventory (Benet-Martinez & John, 1998) measure neuroticism ($\alpha = .57$). Participants are asked to indicate the extent to which certain characteristics are self-descriptive (e.g., “Worries a lot”).

Demographic questions. Participants were asked to indicate their gender, age, place of birth, whether they had ever lived outside Japan (if yes, where and how long), length and status of their current relationship, and their parents' employment status, level of education, and marital status.

Diary Measures

Part A. In the first part of the diary record, participants were asked to describe “the last interaction you had with your partner today.” Interactions were defined as any verbal exchange between the participant and partner that lasted at least 10 minutes. This included talking on the telephone but not communication via email, instant messaging, text messaging, or other web-based exchanges. Participants were asked to indicate the nature of the last interaction with their partner, the time that the last interaction with their partner began, the approximate length of the last interaction, and the approximate length of the total interaction with their partner that day.² Four items measured the degree to which amae was experienced in the interaction; each item was rated on a 5-point Likert scale anchored with *Very little* (1) and *A great deal* (5). These items were, “How much did you request amae from your partner?” “How much amae did your partner provide for you?” “How much did your partner request amae from you?” and “How much amae did you provide for your partner?”

Part B. In second part of the diary record, participants were asked to describe “how you felt in your relationship today,” even if they had not interacted with their partner. The three questions were, “How much intimacy did you experience in your relationship today?” (1 = *Very little*, 5 = *A great deal*), “How satisfied do you feel in your relationship today?” (1 = *Not at all satisfied*, 5 = *Very satisfied*), and “How committed do

you feel to your relationship today?" (1 = *Not at all committed*, 5 = *Very committed*).

Intimacy, satisfaction, and commitment were highly related to each other ($\alpha = .88$ and $.86$ for women and men, respectively), so these three variables were standardized across days and individuals, then summed together for each day to form a single index of daily perceived relationship quality.

Results

Data Analytic Strategy

A basic assumption of statistical analysis is that observations are independent of one other. In this study, however, there were three ways in which observations were not independent: (a) an actor's responses on one day were likely to be associated with their responses on another day, (b) an actor's day-to-day responses were likely to be correlated with the partner's day-to-day responses, and (c) partners' scores on the intake scales were also likely to be related (Kenny, Kashy, & Cook, 2006). Hierarchical linear modeling was used to control for this interdependence. Data was hierarchically structured such that daily diary responses were nested within person, and person was nested within dyad. Analyses were conducted according to Campbell and Kashy's (2002) recommendations for using PROC MIXED in SAS (Cary, NC, USA).

Out of a maximum of 840 observations (60 participants*14 diary observations each), there were 425 completed records for the last interaction with one's partner (Part A), and 760 completed records of feelings about the relationship today (Part B). For each record that contained information on both the extent of amae experienced in the last interaction and on perceived relationship quality that day (56% of records), there were two observations (male rating, female rating). Degrees of freedom, determined by the

Satterthwaite approximation, were therefore based on the number of these interactions for which there was complete male and female ratings.

The following models included actor and partner main effects for attachment anxiety and avoidance, anxiety \times avoidance interaction terms for both actor and partner, gender (1 = male, -1 = female), and the interaction of the attachment terms with gender as predictors of the potential mediators (the four amae variables) or the dependent variable (daily perceived relationship quality). Several additional variables were controlled in the models: actor's age, relationship status (1 = cohabitating, engaged, or married, and -1 = dating), length of the relationship, and actor and partner effects for self-esteem and neuroticism. Inclusion of the control variables did not significantly alter the pattern of results, and therefore they will not be discussed further. All continuous variables were centered on the grand mean prior to analysis. Raw means and standard deviations for the intake and diary data are listed separately for men and women in Table 1. There were no significant gender differences in attachment anxiety or avoidance. Correlation coefficients among these variables are presented separately for men and women in Table 2.

Attachment and Amae

Four multilevel models assessed whether the attachment variables predicted the extent to which actors requested amae, perceived receiving amae, detected the partner's amae request, and provided amae to partner. Regression coefficients for main effects and interactions are reported in Table 3; Table 4 reports the simple slopes for men and women separately.

Consistent with Hypothesis 1, anxious attachment was positively associated with the extent to which actors requested amae, perceived receiving amae, detected partner's amae request, and provided amae to partners. The actor effect of anxious attachment interacted with gender for requesting amae and detecting partner's amae request; simple slope analysis revealed that anxiety was a stronger predictor for men relative to women (requesting amae) or a significant predictor for men only (detecting partner's request). Only one partner effect was significant: women partnered with anxious men detected more amae.

In support of Hypothesis 2, actor's avoidance was negatively associated with all four types of amae behavior. These associations were not significantly qualified by interactions with gender. None of the partner effects were significant.

Several of the anxiety \times avoidance interaction terms significantly predicted amae behavior. To decompose these interactions, Aiken and West's (1991) procedure was used to test the simple slopes of anxiety when avoidance was low (1 *SD* below the mean) and high (1 *SD* above the mean). The estimated means for the dependent variables when anxiety and avoidance were low and high are reported in Table 5. Actor's anxiety was significantly associated with detecting partner's amae request when actor's avoidance was high ($b = .69, t(380) = 3.75, p < .001$), but not when actor's avoidance was low. Inspection of means in Table 5 suggests that dismissing individuals (low anxiety, high avoidance) were less adept at detecting their partner's amae request than were secure (low anxiety, low avoidance), preoccupied (high anxiety, low avoidance), and fearful (high anxiety, high avoidance) individuals. In terms of providing amae to partner, actor's anxiety was a stronger predictor when actors were high in avoidance ($b = .91, t(385) =$

5.00, $p < .0001$) than when they were low in avoidance ($b = .30$, $t(374) = 2.05$, $p < .05$). As reported in Table 5, secure individuals provided more amae to partners than did dismissing individuals, but slightly less than did preoccupied or fearful individuals. Finally, the interaction of partner's anxiety with partner's avoidance as a predictor of actor's provision of amae was significant for women only ($b = .65$, $t(195) = 1.97$, $p = .05$). When partner's avoidance was high, the simple slope of partner's anxiety approached significance when predicting women's provision of amae ($b = .60$, $t(195) = 1.86$, $p = .07$); when partner's avoidance was low, the simple slope of partner's anxiety was not significant. The estimated means in Table 5 reveal that women were least likely to provide amae to dismissing partners, followed by preoccupied partners, and most likely to provide amae to secure and fearful partners.

Amae and Relationship Quality

Actor's and partner's amae variables, gender and its interactions, and the control variables were entered simultaneously into a multilevel model to predict actor's relationship quality. Actor and partner effects for anxious and avoidant attachment, and their interactions with each other and with gender, were also controlled. In support of Hypothesis 3, relationship quality was significantly predicted by actor's perceptions of receiving amae ($b = .73$, $t(324) = 6.32$, $p < .0001$), actor's provision of amae ($b = .40$, $t(311) = 2.88$, $p < .01$), partner's amae request ($b = .36$, $t(321) = 3.17$, $p < .01$), and the interaction of partner's perception of receiving amae with gender ($b = .27$, $t(335) = 2.28$, $p < .05$). Analysis of this interaction revealed that men (but not women) reported significantly greater relationship quality when their partners perceived receiving more

amae ($b = .39$, $t(168) = 2.48$, $p < .05$). None of the other variables significantly interacted with gender.

Attachment and Relationship Quality

To test whether attachment was related to relationship quality, actor and partner effects for anxious and avoidant attachment, their interactions with each other, gender and its interactions, and the control variables were entered into a multilevel model to predict actor's perceived relationship quality. Main effects and interactions with gender are reported in Table 3 and simple slopes in Table 4. A positive association of actor's anxiety with actor's relationship quality emerged as significant, but it was moderated by gender. Simple slopes showed that the association was significant for men, but not for women.³ Partner's anxiety, on the other hand, was negatively related to men's relationship quality, and positively related to women's relationship quality. Actor's avoidance was negatively related to relationship quality, but simple slopes showed that this association was only significant for men. Additionally, actor's anxiety \times avoidance was significant for men ($b = 1.24$, $t(367) = 2.89$, $p < .01$) but not for women. Decomposition of this interaction showed that the simple slope of men's anxiety was significant when men's avoidance was high ($b = 1.56$, $t(367) = 3.93$, $p < .0001$) but not when men's avoidance was low. The estimated means in Table 5 indicate that dismissing men were lower in relationship quality than were secure, preoccupied, and fearful men. Finally, partner's anxiety \times avoidance was significant for women ($b = 1.91$, $t(365) = 4.17$, $p < .0001$) but not for men. The simple slope of partner's anxiety was significant when partner's avoidance was high ($b = 2.00$, $t(365) = 4.84$, $p < .0001$) but not when partner's avoidance was low. As revealed in Table 5, women reported lower relationship quality

when they were partnered with dismissing men than when they were partnered with secure, preoccupied, or fearful men.

Tests of Mediation: Men's Anxiety

Tests of mediation were conducted to assess whether amae behavior accounted for the indirect effect of actor's anxiety on relationship quality (Hypothesis 4). It was necessary to establish that there was a significant reduction in the strength of association between the independent and dependent variables (men's anxiety and men's relationship quality, respectively) when each of the two potential mediators (men's perceptions of receiving amae and providing amae) was controlled in the model. As such, two separate regression models were conducted, one for each potential mediator. These models included actor and partner effects for anxiety and avoidance, their interactions with each other, and men's perception of receiving amae or providing amae; interactions of these main effect variables with gender; and the same control variables as before.

First, the association of men's anxiety with men's relationship quality was significantly reduced from $b = 1.19$ ($t(449) = 4.38, p < .0001$) to $b = .92$ ($t(225) = 3.48, p < .001$) when men's perception of receiving amae was controlled, Sobel's $z = 2.28, p = .02$ (see Figure 1). Second, the contribution of men's anxiety to men's relationship quality was significantly reduced to $b = .66$ ($t(212) = 2.24, p = .03$) when men's provision of amae to partner was controlled, Sobel's $z = 3.64, p < .001$ (see Figure 2). These results therefore buttress Hypothesis 4: more anxious men reported greater relationship quality at least in part because they were more likely to perceive receiving amae and to provide amae to their partners.

Tests of Mediation: Men's Avoidance

To test whether men's perceptions of receiving amae mediated the association of men's avoidance with men's relationship quality, a multilevel model was conducted that included the following predictors: actor and partner effects for anxiety, avoidance, and their interactions; men's perception of receiving amae; interactions with gender; and the control variables. As shown in Figure 3, controlling for men's perception of receiving amae reduced the coefficient of men's avoidance for predicting men's relationship quality from -1.06 ($t(401) = 4.38, p < .0001$) to $-.07$ ($t(177) = -.25, p = .80$) (Sobel's $z = -3.72, p < .001$). This finding therefore provided support for Hypothesis 4: avoidant men may have experienced lower relationship quality because they were less likely to perceive receiving amae.

Discussion

The goal of the current study was to explore the association of attachment style with amae in Japanese heterosexual relationships. Consistent with predictions, actor's attachment anxiety was positively associated with amae, and actor's avoidance was negatively associated with amae – but more strongly and consistently for men. Anxiety was also positively associated with men's relationship quality, and mediational analyses revealed that this was because anxiety contributed to relationship-enhancing perceptions of having received amae and provided amae to partner. Anxious men may have perceived receiving more amae simply because they were more likely to request amae in the first place; correspondingly, women partnered with anxious men were more likely to detect their partner's amae request. And because anxious individuals tend to be hypervigilant for attachment-related cues from their partner (Mikulincer & Shaver, 2007), more anxious men in this study may have been particularly attuned to cues that their partner

was providing amae. This heightened monitoring of their environment for cues may also explain why anxious men were particularly adept at detecting their partner's amae request, enabling them to provide more amae. Men who were higher in anxiety may also have thought, correctly, that providing indulgence would make their partners more satisfied in the relationship – women indeed reported greater relationship quality to the extent that they received amae from their partners – and thereby reduced the likelihood of romantic rejection. If anything, women partnered with anxious men reported *greater*, not worse, relationship quality. In turn, receiving and providing amae may have satisfied anxious men's needs for intimacy and interdependence, thus enhancing their overall relationship quality. These associations, however, were primarily significant for men's anxiety; women's anxiety was not significantly related to their own relationship quality, and even more, women's anxiety was *negatively* related to their partner's relationship quality.

In contrast, men who were higher in avoidance were less likely to perceive receiving amae, and in turn, reported poorer relationship quality. Avoidant men may have perceived receiving less amae because they were less likely to request it in the first place. That men's perceptions of receiving amae was the only variable to mediate the association of both anxious and avoidant attachment with relationship quality may reflect the importance of perceived partner responsiveness in close interactions (Laurenceau, Feldman Barrett, & Pietromonaco, 1998), culturally expressed here as perceptions of receiving amae. Avoidant men's deactivated amae behavior therefore functioned to maintain interpersonal distance, which may have contributed to reduced relationship quality. This was particularly true for men who were low in anxiety and high in

avoidance (see Table 5), suggesting that the self-reliance that is characteristic of dismissing attachment may be particularly toxic for relationships in cultural contexts that emphasize interdependence. Avoidant women, too, engaged in less amae behavior, but unlike men's avoidance, women's avoidance was not related to their lower relationship quality.

It is important to note that a direct effect of men's anxiety on their own relationship quality remained after controlling for men's perception of receiving amae and providing amae. In contrast, there was no direct effect of men's avoidance on their own relationship quality after controlling for men's perception of receiving amae. Further analysis revealed that the positive direct effect of men's anxiety on their relationship quality was largely driven by the association of anxiety with the commitment and intimacy components of relationship quality rather than with the satisfaction component. Similarly, other studies based on Western and Japanese samples have found that anxious attachment is positively associated with commitment (Joel et al., 2011) and with desire for intimacy (Banai, Mikulincer, & Shaver, 2005). On the one hand, people who are high in anxious attachment crave commitment and intimacy, but on the other hand, they tend to experience less satisfying relationships because they doubt their worth to partners and self-protectively withdraw (Mikulincer & Shaver, 2007). Alternatively, highly anxious Japanese men may have experienced enhanced relationship quality through displaying partner-pleasing behaviors not directly motivated by amae (e.g., showing understanding and respect) in a bid to pre-empt rejection. Finally, the greater relationship quality reported by highly anxious men is less notable when one considers that securely-attached men reported similar levels of relationship quality (see Table 5).

How might these results elucidate what is overlapping and what is distinctive about attachment and amae? Although anxiety and avoidance were correlated with amae in the present study, some amae behaviors still predicted relationship quality after controlling for attachment style – a testament to the distinctiveness of these constructs. If anything, this study supports a conceptual model of amae as a conduit through which attachment style influences interpersonal functioning in Japan. For instance, greater anxiety may motivate other-directed amae behavior (detecting partner's amae request and providing amae) that in turn enhances relationship quality.

Gender Differences. Women were more likely than men to request amae, perceive receiving amae, and to detect their partner's amae request, consistent with other research that has found that women are more likely to express amae in romantic relationships (Ohsako & Takahashi, 1994). Men's attachment style, however, explained more variance in their own and in their partner's amae behavior and relationship quality compared to women's attachment style. Because women in general may be more socialized to engage in amae behaviors than men, there may be less variance in women's amae behavior that may be explained by individual differences in attachment style. It is also possible that situational factors exert more influence on women's amae behavior, such as the type of relationship in which amae is expressed (romantic, friendship, or familial), the quality of the relationship, and the characteristics of one's partner. Accordingly, the present findings showed that women were most likely to provide amae to fearful partners and least likely to provide amae to dismissing partners.

Limitations and Future Directions

Conclusions based on this relatively small sample of young, urban, undergraduate dating couples must be interpreted with caution. Sampling from older, rural, or married populations, both inside and outside Japan, might lead to a different pattern of results altogether. Results were also limited by some of the measures used here. In particular, the ECR-R is less precise at measuring the lower ends of the anxiety and avoidance dimensions – i.e., attachment security – than the higher ends (Fraley et al., 2000). Perhaps a categorical measure of attachment security, such as Hazan and Shaver's (1987) measure, might allow for clearer inferences to be drawn about the association of secure attachment with amae behaviors. As well, the four items that assessed amae in this study may have been insufficient to tap such a multifaceted construct. Future studies might ask respondents to provide a short qualitative account of any instances of amae behavior in their interactions with their partner that day, and rate whether the amae experience was viewed positively (e.g., when favor requests are of a reasonable size; Niiya & Ellsworth, in press), or negatively (e.g., when a partner requests amae at an inappropriate place or time; Behrens, 2004). Such ratings could further differentiate the amae behavior and relationship quality of secure and highly anxious individuals, who showed similar patterns on several dependent variables in this study.

Finally, it deserves mention that analyses based on this participant sample have been reported elsewhere (Marshall et al., 2011). Although this earlier work did not assess the association of attachment with amae, but rather examined amae as a predictor of intimacy motivation, relationship quality, and conflict, it is nonetheless important that future research replicate and extend the current findings in an entirely new data set.

Concluding Remarks

This study sought to fill a gap in the amae literature – the empirical link between attachment and amae (Behrens, 2004). In contrast to Western findings, the present study suggested that for Japanese men, anxious attachment contributed positively to perceived relationship quality at least in part because it facilitated interdependence-enhancing amae behavior. Similar to Western findings, men’s avoidant attachment was negatively associated with their own relationship quality, but these results additionally suggested that deactivated amae behavior completely mediated this association. Overall, the present findings suggest that amae behavior may provide a missing link that helps to explain the association of attachment style with relationship quality in Japanese couples.

Acknowledgements

This research was supported by a Postdoctoral Fellowship grant awarded by the Japanese Society for the Promotion of Science to the author. I am grateful to Professor Susumu Yamaguchi and his students at the University of Tokyo who assisted with translations and data collection. I also thank Ms Kim Chuong and Professor Atsushi Aikawa for their assistance with data collection, and Ms Miki Tanaka for her help with translations and for her cultural insight.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Banai, E., Mikulincer, M., & Shaver, P. R. (2005). "Self object" needs in Kohut's self psychology: Links with attachment, self-cohesion, affect regulation, and adjustment. *Psychoanalytic Psychology, 29*, 224-260.
- Bartholomew, K., & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.
- Bartz, J. A., & Lydon, J. E. (2006). Navigating the interdependence dilemma: Attachment goals and the use of communal norms with potential close others. *Journal of Personality and Social Psychology, 91*, 77-96.
- Behrens, K. Y. (2004). A multifaceted view of the concept of *amae*: Reconsidering the indigenous Japanese concept of relatedness. *Human Development, 47*, 1-27.
- Benet-Martinez, V., & John, O. P. (1998). *Los cinco grandes* across cultures and ethnic groups: Multitrait multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729-750.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1: Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2: Separation*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3: Loss*. New York: Basic Books.
- Campbell, L., & Kashy, D. A. (2002). Estimating actor, partner, and interaction effects for dyadic data using PROC MIXED and HLM: A guided tour. *Personal Relationships, 9*, 327-342.

- Campbell, L., Boldry, J., Simpson, J. A., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology, 88*, 510-531.
- Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development, 65*, 971-981.
- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644-663.
- Fraley, R. C., Waller, N. G., & Brennan, K. G. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*, 350-365.
- Gjerde, P. F. (2004). Culture, power, and experience: Toward a person-centered cultural psychology. *Human Development, 47*, 138-157.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.
- Joel, S., MacDonald, G., & Shimotomai, A. (2011). Conflicting pressures on romantic relationship commitment for anxiously attached individuals. *Journal of Personality, 79*, 51-74.
- Johnson, F. A. (1993). *Dependency and Japanese socialization: Psychoanalytic and anthropological investigations into amae*. New York: New York University Press.
- Kashy, D. A., & Kenny, D. A. (2000). The analysis of data from dyads and groups. In H. Reis & C. M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 451-477). New York: Cambridge University Press.

- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: The Guilford Press.
- Laurenceau, J., Feldman Barrett, L., & Pietromonaco, P. R. (1998). Intimacy as a process: The importance of self-disclosure and responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238-1251.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.
- Marshall, T. C., Chuong, K., & Aikawa, A. (2011). Day-to-day experiences of *amae* in Japanese romantic relationships. *Asian Journal of Social Psychology, 14*, 26-35.
- Maruta, T. (1992). Does an American puppy *Amaeru*? A Comment on Dr. Doi's paper. *Infant Mental Health Journal, 13*, 12-17.
- Mikulincer, M., Birnbaum, G., Woddis, D., & Nachmias, O. (2000). Stress and accessibility of proximity-related thoughts: Exploring the normative and intraindividual components of attachment theory. *Journal of Personality and Social Psychology, 78*, 509-523.
- Mikulincer, M., Dolev, T., & Shaver, P. R. (2004). Attachment-related strategies during thought-suppression: Ironic rebounds and vulnerable self-representations. *Journal of Personality and Social Psychology, 87*, 940-956.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford.
- Mizuta, I., Zahn-Waxler, C., Cole, P. M., and Hiruma, N. (1996). A cross-cultural study of preschoolers' attachment: Security and sensitivity in Japanese and US dyads. *International Journal of Behavioral Development, 19*, 141-159.

- Niiya, Y., Ellsworth, P. C., & Yamaguchi, S. (2006). Amae in Japan and the United States: An exploration of a “culturally unique” emotion. *Emotion, 6*, 279-295.
- Niiya, Y., & Ellsworth, P. C. (in press). Acceptability of favor requests in the U.S. and Japan. *Journal of Cross-Cultural Psychology*.
- Ohsako, H., & Takahashi, S. (1994). [in Japanese] Effects of ‘amae’ on interpersonal emotions and conflict-solution strategies in interpersonal conflict situations. *The Japanese Journal of Experimental Social Psychology, 34*, 44-57.
- Rothbaum, F., & Kakinuma, M. (2004). Amae and attachment: Security in cultural context. *Human Development, 47*, 34-39.
- Rothbaum, F., Weisz, J., Pott, M., Miyake, K., & Morelli, G. (2000). Attachment and culture: Security in the United States and Japan. *American Psychologist, 55*, 1093-1104.
- Tafarodi, R. W., & Swann, W. B., Jr. (1995). Self-liking and self-competence as dimensions of global self-esteem: Initial validation of a measure. *Journal of Personality Assessment, 65*, 322-342.
- Taketomo, Y. (1986). Amae as metalanguage: A critique of Doi’s theory of amae. *Journal of the American Academy of Psychoanalysis, 14*, 525-544.
- van Ijzendoorn, M. H., & Sagi, A. (1999). Cross-cultural patterns of attachment: Universal and contextual dimensions. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment theory and research* (pp. 713-734). New York: Guilford Press.
- Vereijken, C. M. J. L., Riksen-Walraven, J. M. A., & van Lieshout, C. F. M. (1997). Mother-infant relationships in Japan: Attachment, dependency, and amae. *Journal of Cross-cultural Psychology, 28*, 442-462.

Yamaguchi, S. (2004). Further clarifications of the concept of Amae in relation to dependence and attachment. *Human Development*, 47, 28-33.

Endnotes

¹ An *indirect effect* refers to the association of the independent variable with the dependent variable through the mediator, a *total effect* refers to the association of the independent variable with the dependent variable when the mediator has not been controlled, and a *direct effect* refers to the association of the independent variable with the dependent variable after the mediator has been controlled. Mediation occurs when the direct effect is smaller than the total effect after taking into account the indirect effect.

² These variables were dummy-coded and entered into the regression analyses, but because they did not affect the overall pattern of results, they were removed from the models and will not be discussed further.

³ Men's anxiety was significantly related to their daily ratings of commitment ($b = .64$, $t(481) = 5.02$, $p < .0001$) and intimacy ($b = .68$, $t(465) = 5.19$, $p < .0001$), but not relationship satisfaction ($b = .23$, $t(465) = 1.88$, $p = .06$).

Figure Captions

Figure 1. *Testing men's perception of receiving amae as a mediator of the actor effect of men's anxiety on men's relationship quality (Sobel's $z = 2.28$, $p = .02$).*

Figure 2. *Testing men's provision of amae as a mediator of the actor effect of men's anxiety on men's relationship quality (Sobel's $z = 3.64$, $p < .001$).*

Figure 3. *Testing men's perception of receiving amae as a mediator of the actor effect of men's avoidance on men's relationship quality (Sobel's $z = -3.72$, $p < .001$).*

Table 1

Means and standard deviations (in parentheses). The diary variables have been averaged across days and individuals.

	Men	Women
Attachment anxiety	2.52 (.67)	2.53 (.76)
Attachment avoidance	2.16 (.58)	2.19 (.73)
Amae requested	3.33 (1.35)	3.43 (1.37)
Amae received	3.51 (1.31)	3.57 (1.28)
Amae detected	3.44 (1.32)	3.56 (1.18)
Amae provided	3.62 (1.29)	3.38 (1.26)
Intimacy	3.16 (1.32)	3.34 (1.28)
Satisfaction	3.21 (1.26)	3.22 (1.23)
Commitment	3.19 (1.36)	3.18 (1.16)

Table 2

Correlations among men's and women's variables

Variable	1	2	3	4	5	6	7
1. Anxiety	.12	.48**	-.05	-.07	.12 [†]	-.06	.08
2. Avoidance	.37*	.47**	-.12 [†]	-.09	-.11	-.16*	-.15**
3. Amae requested	.16*	-.34***	.41***	.79***	.55***	.67***	.59***
4. Amae received	.03	-.33***	.73***	.40***	.55***	.55***	.54***
5. Amae detected	.23***	-.15*	.61***	.65***	.44***	.78***	.57***
6. Amae provided	.23***	-.10	.65***	.67***	.80***	.41***	.55***
7. Relationship quality	.12*	-.24***	.65***	.70***	.68***	.74***	.56***

Note. Men's data is presented below the diagonal, and women's data is presented above the diagonal. Correlations along the diagonal are between dyad members.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Unstandardized regression coefficients for main effects and interactions

Predictors	Actor Requests Amae	Actor Receives Amae	Actor Detects Partner's Request	Actor Provides Amae to Partner	Relationship Quality
Sex	-.18**	-.16*	-.12*	.05	-.01
Attachment Anxiety					
Actor effect	.72***	.30*	.44***	.60***	.55**
Actor effect X sex	.34**	.12	.40***	.07	.64***
Partner effect	.16	.10	.13	-.16	.05
Partner effect X sex	-.07	.12	-.32**	-.06	-.71***
Attachment Avoidance					
Actor effect	-.75***	-.61***	-.43***	-.27*	-.50**
Actor effect X sex	-.17	-.09	-.10	.01	-.56**
Partner effect	-.16	.08	-.07	-.07	-.21
Partner effect X sex	-.17	-.21 [†]	.02	.03	.26
Anxiety X Avoidance					
Actor effect	.23	.01	.38*	.47**	.52*
Actor effect X sex	.39 [†]	.07	.42 [†]	.40 [†]	.66*
Partner effect	-.25	.13	-.06	.05	.97***
Partner effect X sex	-.21	.02	-.37 [†]	-.48*	-1.09***
Relationship status	-.07	.13	.05	.15	.57***
Relationship length	.20*	.29***	.18*	.15*	-.01

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Unstandardized simple slopes for men and women

Predictors	Actor Requests Amae	Actor Receives Amae	Actor Detects Partner's Request	Actor Provides Amae to Partner	Relationship Quality
Actor's Anxiety					
Men	1.06***	.41*	.84***	.68***	1.19***
Women	.38*	.18	.04	.53***	-.09
Partner's Anxiety					
Men	.09	.23	-.19	-.22	-.66**
Women	.23	-.02	.45**	-.10	.76**
Actor's Avoidance					
Men	-.92***	-.70***	-.53**	-.26	-1.06***
Women	-.58***	-.52***	-.33*	-.28*	.05
Partner's Avoidance					
Men	-.33*	-.13	-.05	-.10	.05
Women	.01	.30	-.09	-.04	-.47

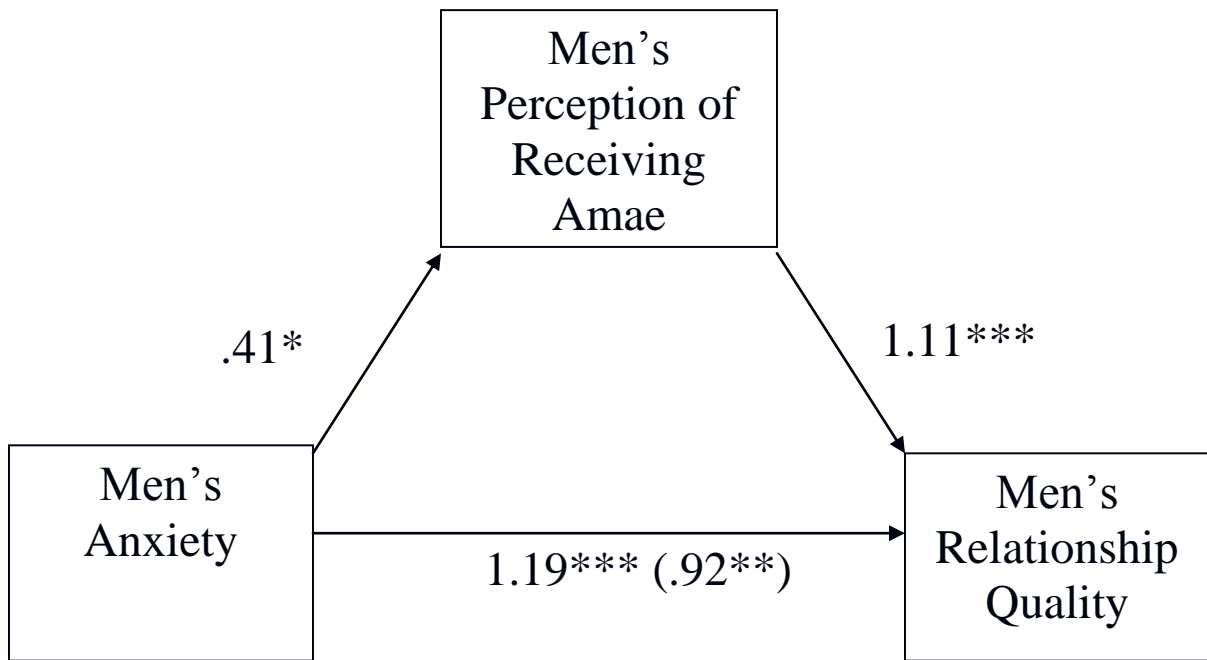
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

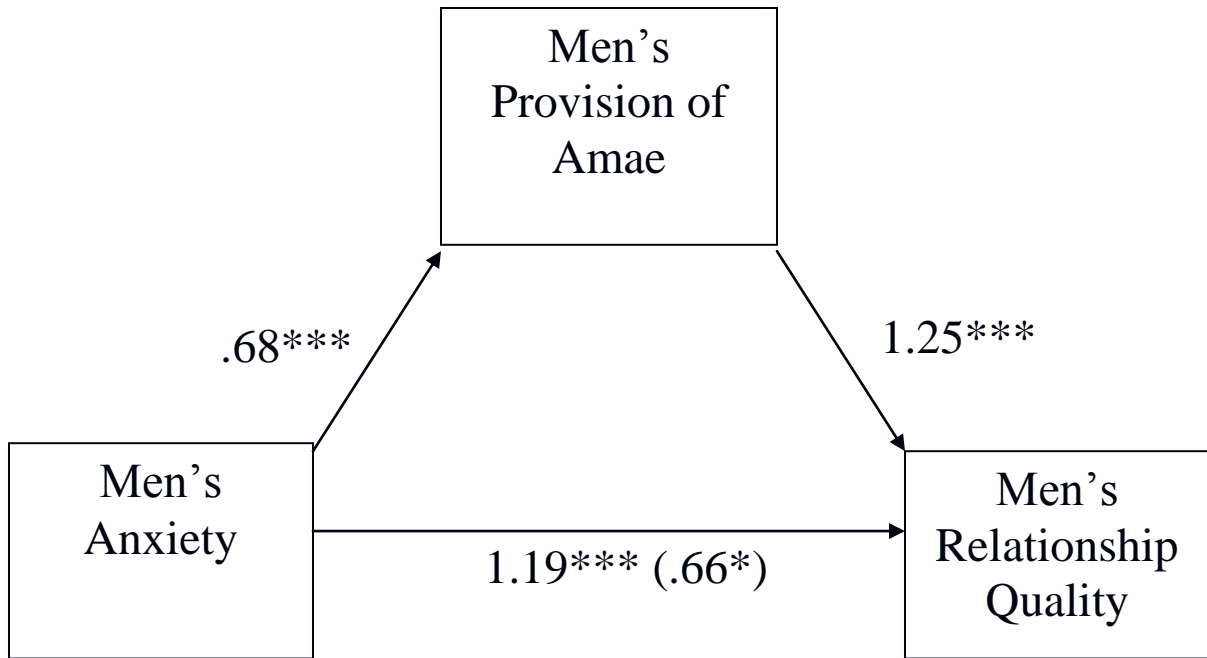
Estimated means for selected dependent variables when anxiety and avoidance are low (1 SD below the mean) and high (1 SD above the mean).

Actor Detects Partner's Amae Request			Actor Provides Amae to Partner			Women: Providing Amae to Partner			Men: Relationship Quality			Women: Relationship Quality		
A ANX	A AVOID		A ANX	A AVOID		P ANX	P AVOID		A ANX	A AVOID		P ANX	P AVOID	
Low	High		Low	High		Low	High		Low	High	Low	High	Low	High
Low	3.51	2.60	Low	3.27	2.48	Low	3.47	2.93	Low	9.39	6.94	Low	9.89	7.06
High	3.79	3.58	High	3.68	3.77	High	3.22	3.65	High	9.71	9.72	High	9.61	10.32

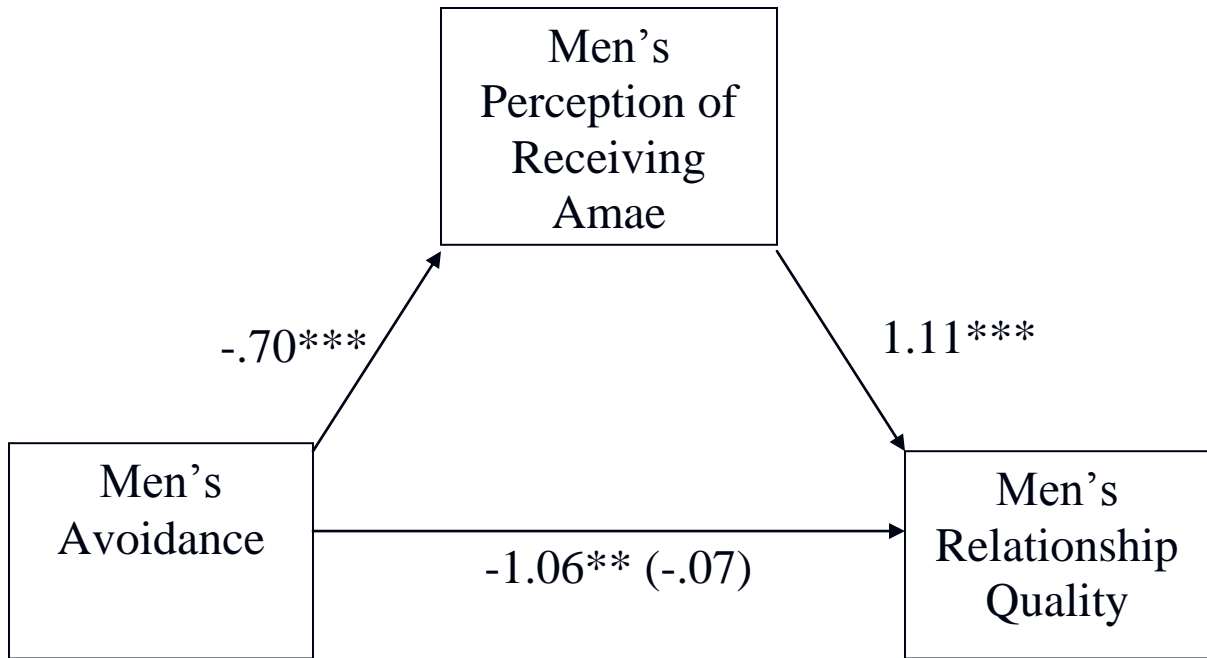
Note. A ANX = actor's anxiety; A AVOID = actor's avoidance; P ANX = partner's anxiety; P AVOID = partner's avoidance.



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



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



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