Mutual and Non-Mutual Social Support: Cultural Differences in the Psychological, Behavioral, and Biological Effects of Support Seeking

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Abstract
Social support seeking is not uniformly beneficial for different cultural groups, and in fact, is experienced as less helpful and more distressing for Asians and Asian Americans compared with European Americans. However, relationship factors that may attenuate this cross-cultural difference are little understood. We examined the effects of mutual (i.e., interdependent) and non-mutual support on psychological, biological, and behavioral stress responses to support seeking using a laboratory stressor paradigm. Findings show that across all three distress indicators, East Asian Americans were more benefited when they construed support as mutual versus non-mutual, whereas European Americans' response did not differ by support condition. Furthermore, the data support previous research showing that Asian Americans are more likely to seek support from discretionary (i.e., peers) than obligatory ties (i.e., parents). Our discussion addresses cultural differences in the priority placed on mutuality, interdependence, and harmony in relationships, and their implications for how people construe their relationships. Future areas for research are discussed.

Keywords
social support, culture, Asian/Asian American, stress, cortisol

At a glance, social support appears straightforward and easy to understand. When a person is in need of help, advice, or encouragement, he or she can turn to a friend, romantic partner, family member, religious or community leader, or even a professional counselor. On the whole, social support works and works quite well. Although received support has a more tenuous relationship with health (e.g., Uchino, 2009), studies have thoroughly documented the many physiological and mental health benefits of perceived support that include improved immune, cardiovascular, and neuroendocrine function; decreased depression and anxiety; and protective buffering against the negative impact of stress (Cohen, 2004; Seeman, 1996; Taylor, 2007).

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However, research examining cultural differences in support processes has illuminated the cultural specificity of the dominant understanding of what characterizes effective and skilled support (Mortenson, Liu, Burleson, & Liu, 2006). Is social support even a desired or culturally sanctioned method for coping? For example, while European Americans are likely to choose seeking support as an appropriate way to deal with emotional distress, Chinese are less likely to endorse support seeking and are more likely to engage in distraction or self-blame to manage their distress (Mortenson, 2006). In an American context, studies have found that Asian Americans from collectivistic cultural heritages not only report less frequent use of support but also perceive support to be less helpful than European Americans from individualistic cultural backgrounds (Kim, Sherman, Ko, & Taylor, 2006; Taylor et al., 2004; Wang, Shih, Hu, Louie, & Lau, 2010). These studies have implicated concerns that emphasize relational interdependence, such as losing face and burdening others—prioritized in East Asian cultural contexts (Chang & Holt, 1994)—to explain this attenuation of the benefits of support seeking. Indeed, in collectivistic cultures, a primary aim in the support process may be to restore social harmony and repair social rupture, rather than the highly person-centered comforting and solace characteristic of individualistic cultural contexts (Burleson, 2003).

Culture, Relationships, and Social Support

In broad strokes, cultural psychologists have outlined some foundational differences among cultures with regard to how people view the self and their relationships with others. Individualistic cultures, such as those in Western Europe and North America, typically construe the self as independent, autonomous, and motivated primarily by personal goals to assert and express the unique self (Markus & Kitayama, 1991; Triandis, 1994). This stands in stark contrast with the interdependent self generally found in collectivistic cultures, such as in Asia, that views the self as a relational entity embedded in a social network in which the interests of the collective are prioritized over personal desires (Morling, Kitayama, & Miyamoto, 2002). For the individualist, relationships are typically viewed as freely chosen and voluntary, whereas for the collectivist, relationships entail mutual obligation and the maintenance of group harmony (Kim, Sherman, & Taylor, 2008). For example, research has found that fulfilling one's role-related expectations to help family and friends is positively correlated with satisfaction and choice for Indians, but not so for North Americans for whom preserving autonomy is more valued (Miller, Das, & Chakravarthy, 2011). This underscores the obligatory nature of relationships in collectivistic contexts versus the relative importance placed on perceptions of autonomy in individualistic contexts.

Indeed, social psychologists have delineated two different types of relationships—communal and exchange—on the basis of norms that govern the giving and acceptance of benefits (Clark & Mills, 1979, 1993). Exchange relationships are distinguished by concerns over how much an individual will receive in return for benefiting another, and how much is owed for any benefits received; thus, the receipt of benefits or help denotes an obligation to return an equivalent benefit. Communal relationships, on the contrary, do not follow exchange rules, and benefits are given without obligation to immediately repay given the stronger priority placed on the welfare of the other person. Instead, responsiveness to another's needs demonstrated over the long term in the relationship is paramount. Cultural differences have been detected according to this distinction; for example, Hindu Indians give greater emphasis to communal norms in friend relationships, whereas European Americans practice a relaxed form of exchange in their friendships (Miller et al., 2014). Thus, it is arguable that support should be exchanged more freely and without worry of repayment in communal relationships more emphasized in collectivistic cultures. Yet, the less frequent use of support by Asians and Asian Americans compared with European Americans (e.g., Taylor et al., 2004; Wang et al., 2010) points to an alternative notion: Concerns for the other's welfare (demonstrated through other-responsiveness and reluctance to burden others) serve as disincentives for support seeking by asserting one's own needs.

Social support, then, can take on different meanings depending on cultural framework. Are social ties potential resources from which one can request and draw personally desired support at will? If so, then support is likely recruited liberally to meet the individual's needs with relatively less attention paid to the over-arching relationship dynamic. Or, do supportive interactions take place amid a relational backdrop in which the broader dynamic and history of the social bond are prioritized? If this is true, then support is less likely to be actively sought due to concerns about how such actions would affect the relationship.

These relational concerns may help explain why prior research has found cultural differences in the *kinds* of relationships from which support is preferentially sought. For example, Asian Americans tend to seek daily support from discretionary ties such as peers, reflecting more flexible and optional relationships, compared with the involuntary and obligatory nature of family relationships; their European American counterparts show the opposite preference (Wang et al., 2010). And a laboratory experiment has found that Asian Americans are less likely to seek support when the primed relationship is an in-group versus out-group relationship (Kim et al., 2006). Thus, concerns about relationship well-being—that affect support-seeking behavior—may be more or less heightened for Asian Americans depending on the kind of relationship in question.

One particular context that has been shown to moderate the experience of support for Asian Americans versus European Americans is the method by which the support is obtained. For example, Mojaverian and Kim (2013) found that receiving unsolicited versus solicited support led to better psychological outcomes for Asian Americans, ostensibly because they were relieved of the potential relational risks that come with requesting support. However, little difference was shown for European Americans for whom it seemed most important to simply get the support, regardless of how the support arose. Furthermore, Taylor, Welch, Kim, and Sherman (2007) examined cultural differences in the impact of explicit support (directly sought via disclosure) and implicit support (indirectly obtained without disclosure) on psychological and biological stress responses. Using a laboratory stressor paradigm, they found that Asian Americans showed greater increases in subjective distress and cortisol reactivity (a stress hormone secreted by the hypothalamic–pituitary–adrenal axis) when explicitly seeking support via writing a letter for help, but benefited from implicit support obtained through writing and reflecting on one's valued social group. The European Americans, on the contrary, were more comforted by the act of explicitly requesting support. Unsurprisingly, recent work has indicated that explicit support has much closer ties with health for European Americans, but not Asian Americans (Chiang, Saphire-Bernstein, Kim, Sherman, & Taylor, 2013). These findings are consistent with prior research showing that European Americans view negative feelings as something to be examined and explicitly explored in discourse with others, whereas collectivists are more likely to focus on managing the problem in other ways that preserve personal composure and smooth relationships (Burleson & Mortenson, 2003). Together, these findings indicate that when considering explicit and directly sought support, the act of seeking and receiving support may be more beneficial for individualists who prioritize agency in "getting one's needs met." For collectivists, however, the effects of seeking support are likely shaped by the broader context of the relationship, with concern for nurturing harmonious and enduring social bonds.

Mutual and Non-Mutual Support

One contextual aspect of the relationship that is particularly relevant to social harmony is whether the relationship is characterized by *mutual or non-mutual support*—that is, whether the relationship involves the interdependent sharing of help and comfort between relationship partners. Certainly, expectations about relationships are critical in this regard, as illustrated by the norms that govern the receipt and provision of benefits in exchange/communal relationships (e.g., Clark & Mills, 1979; Miller et al., 2014). For example, the couples literature has found that daily

supportive equity, or the reciprocation of supportive acts, leads to better psychological outcomes (Gleason, Iida, Bolger, & Shrout, 2003; Gleason, Iida, Shrout, & Bolger, 2008). In contrast, consistently being on the receiving end of support may generate threats to self-esteem and autonomy, thus explaining why support receipt sometimes has a paradoxically negative effect (Bolger & Amarel, 2007; Bolger, Zuckerman, & Kessler, 2000). Perhaps these costs to the self are alleviated when relationship partners both provide, as well as receive, support in a reciprocal and equal way. This notion would be supported by equity theory's (e.g., Hatfield & Traupmann, 1981) fundamental proposition that equitable apportioning of rewards and punishments among group members is paramount, and that inequitable relationships—in which individuals feel over-benefitted or under-benefitted—will prompt feelings of distress (e.g., guilt, resentment) that motivate individuals to restore equity in (or end) the relationship.

It is notable that this explanation evokes traditionally individualistic priorities through its emphasis on independence, self-enhancement, and the reciprocal exchange of benefits. We contend that in the interdependent cultural framework, participation in the joint sharing of help and comfort may be conceived as contributing to the welfare of the relationship, helping to restore or preserve harmonious ties, and perhaps off-setting any burden on one's partner that may result from the use of support. Indeed, while a *quid pro quo* approach to support provision and receipt may be characteristic of exchange relationships predicated on equity, a focus on cooperative and mutual support may reflect an interdependent responsiveness to a partner's needs as well as investment in the well-being of the relationship. Studies have yet to examine how this aspect of mutuality or interdependence shapes the benefits, or disadvantages, of support. Furthermore, although the supportive equity research has addressed enacted daily support with a focus on support receipt compared with support-seeking behavior (e.g., Gleason et al., 2003), no studies have examined how the *perception* of one's supportive relationship as being mutual or non-mutual—which directly involves one's own support-seeking behavior—may affect the experience of explicit support seeking.

The Current Study

Rather than viewing support exchanges as discrete transactions that take place in isolated moments, we propose that a contextual view that considers whether the supportive relationship is viewed as mutual or non-mutual has influence for how that support is experienced for individuals from collectivistic versus individualistic cultural backgrounds. We conducted a laboratory stressor experiment using a 2 × 2 between-subjects design to examine whether Asian Americans and European Americans experience explicit support seeking differently depending on whether the individual was primed to view the support as mutual or non-mutual. Distress was measured in three ways using psychological, biological, and behavioral indicators.

We hypothesized that for Asian Americans, support that is perceived as *mutual* (that is, taking place in a relationship in which both partners receive and provide support) would lead to more benefit and less distress. Conversely, we predicted that *non-mutual* support (in which one partner consistently receives, and the other provides, support) would lead to greater distress for Asian Americans, given the interdependent cultural emphasis on maintaining harmonious relationships. For European Americans, we expected there to be no effect of support context on psychological, biological, and behavioral distress, given the relative tendency in independent cultural contexts to prioritize individual needs above broader relationship dynamics.

Finally, we hypothesized that there would be cultural differences in the type of relationship participants shared with the person they chose to seek support from in the experiment. We predicted that Asian Americans would choose to seek support more frequently from discretionary (e.g., peers) versus obligatory ties (e.g., parents) for which the relational consequences of potential support misfires are greater.

Method

Participants

The sample was comprised of 41 Asian American (AA; first generation $n = 15$, second generation $n = 26$) and 41 European American (EA) college students at a large state university in California. The average age of participants was 20.2 years ($SD = 2.2$), and the majority were female (65%). Participants were eligible if they self-identified as non-immigrant (i.e., third generation or later) European American/Caucasian/White (EA), or if they identified as immigrant (i.e., first or second generation) Asian/Asian American of East Asian ancestry (i.e., Chinese, Korean, Japanese). We chose these criteria to better ensure that EA participants were steeped in an individualistic environment and that AA participants were exposed to and raised by parents from collectivistic cultural backgrounds typical of East Asian societies that are shaped by Confucian values. Participants were either enrolled in introductory psychology courses or recruited through fliers and emails, and were compensated with course credit or a small monetary award.

Salivary cortisol, a stress hormone end product resulting from the activation of the hypothalamic–pituitary–adrenal axis, was collected in the study. Thus, a brief phone screening was conducted to exclude individuals with an endocrine disorder; a diagnosed anxiety or depressive disorder; an autoimmune, blood, or metabolic disease; any form of cancer; serious allergies or asthma; or a cardiovascular condition. Individuals were also excluded if they were pregnant, were taking hormonal contraceptives, or had breast fed in the past 6 months.

Procedure

We instructed participants not to consume dairy products 3 hr before the experiment and not to eat or drink in the 30 min before their participation. Participants completed a 90-min session scheduled between 2:00 p.m. and 6:00 p.m. to control for the circadian rhythm of cortisol (Kudielka, Schommer, Hellhammer, & Kirschbaum, 2004). After providing consent, participants were asked to complete a baseline measure of mood (Positive and Negative Affect Schedule [PANAS]; Watson, Clark, & Tellegen, 1988) and a questionnaire assessing their daily activities and general health conditions that might affect basal cortisol activity (e.g., smoking, exercise). They also provided a baseline salivary cortisol sample.

Participants were then read instructions for the Trier Social Stress Test (TSST; Kirschbaum, Pirke, & Hellhammer, 1993), a lab stressor paradigm involving a mental arithmetic and speech task that has been shown to reliably trigger temporary and safe biological (i.e., cortisol) and psychological stress responses (Dickerson & Kemeny, 2004). Instructions asked participants to use 3 min to prepare a 5-min speech about why they would be a good candidate for an administrative assistant position in the psychology department.

After the speech preparation period, participants were randomly assigned to one of two writing conditions—mutual support or non-mutual support. In both conditions, participants were asked to complete two writing tasks. First, they spent 3 min writing a letter to a close other (of their choosing) asking for help with the upcoming speech and math tasks. Second, participants were asked to spend another 3 min writing about a previous support interaction with that same close other. In the *non-mutual support condition*, participants were specifically asked to write the letter for help to someone they had *received help or support from in the past*, which was then followed by writing about a previous time(s) when they had received help or support from that same person. In the *mutual support condition*, participants were specifically instructed to write the letter for help to someone they had *provided help or support to in the past*, after which they wrote about a previous time(s) when they provided help or support to that same person. Thus, after initially seeking support in the letter writing task, participants were then primed by the

second writing task to think about their support seeking as taking place in either a mutual or interdependent context (e.g., leveraging support from someone they had previously provided support to) or a non-mutual context (e.g., leveraging support from someone they had previously received support from).

Participants then proceeded with the TSST lab stressor tasks. Speeches were given under evaluative conditions in a room with a video camera and two confederate judges (1 male, 1 female) who were race matched with the participant (i.e., EA participants had EA judges; AA participants had AA judges). The speech was followed by a mental arithmetic task that required participants to count aloud backward from 2,083 by 13 for 5 min. During both tasks, judges (dressed in white lab coats and using clipboards) were unresponsive and applied pressure by instructing participants to "please continue" or "go faster" when participants paused. Judges also corrected participants' math responses and encouraged them to "try to do better."

Immediately following the TSST, participants completed the postchallenge measure of mood (PANAS). They were then asked to sit quietly until the postchallenge saliva sample was collected at 25 min after the start of the TSST, given the documented length of time needed to observe a rise in cortisol in response to an acute stressor (Kirschbaum et al., 1993).

Cortisol Assay

Salivary cortisol samples were self-collected (under researcher supervision) using a pre-packaged, sterile saliva collection device consisting of cotton oral swabs in plastic storage tubes. Saliva samples were immediately stored in a freezer, and later shipped under climate-controlled conditions to Salimetrics LLC, a research facility specializing in saliva immunoassay testing. Samples were assayed using a highly sensitive enzyme immunoassay cleared by the U.S. Federal Drug Administration (510k) for use as an in vitro diagnostic measure of adrenal function (Salimetrics, State College, PA). The average of duplicate assays for each sample was used in all analyses, and units are reported in ug/dl (micrograms per deciliter). We used the logged value of salivary cortisol for all analyses to correct for skew.

Anxious Behavior Coding

Participants' speeches were recorded for the purposes of coding anxious behavior—indicating distress, apprehension, or unease—on a 1 (*not at all*) to 5 (*extremely/all the time*) scale. Following the coding scheme described in Okazaki, Liu, Longworth, and Minn (2002), four behavioral indicators of anxiety were assessed to arrive at a global code for anxious behavior. These included anxious facial expressions (e.g., looking nervous or uneasy, averted eye gaze from judges), shaking or fidgety movements (e.g., leg tapping), disruptions in speech indicative of anxiety (e.g., voice cracking, wavering), and verbal statements of negative affect (e.g., being "nervous" or "embarrassed"). All raters were blind to study hypotheses, and reached a high level of inter-rater reliability on 20 training tapes prior to formal coding (Intraclass Correlation Coefficient [ICC] = .92). Each video was then coded by two raters (1 EA, 1 AA), who each individually coded the speeches and then met with their partner to reconcile coding discrepancies. Weekly team meetings provided oversight of coding and resolved lingering coding discrepancies. Reconciled codes were used for all analyses.

Close Other Coding

Letters for help were also coded by raters regarding the nature of the relationship shared with the close other. Specifically, two raters categorized whether the close other addressed in the letter was a parent, another non-parent authority figure (e.g., a teacher, coach), or a peer (e.g., friend,
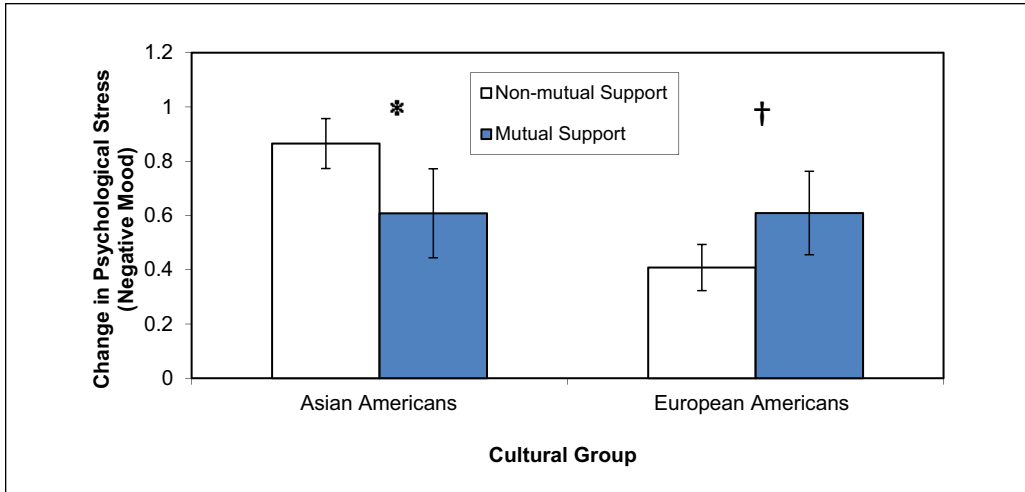
Figure 1. Change in psychological stress (negative mood) from baseline to postchallenge as a function of cultural group and support condition.
*$p \leq .05$. †$p \leq .10$

sibling). Raters made their decisions using information gathered from the salutation (e.g., "Dear Mom," "Hey Sally") and references to the relationship contained in the text of the writing tasks (e.g., "As one of my oldest friends, you know my strengths and weaknesses . . ."). Raters reached an extremely high level of inter-rater reliability on 20 training letters ($\kappa = 1.0$), and each letter was subsequently coded by both raters who reconciled any discrepancies. Although participants could choose to write to whomever they wanted, coding revealed that the vast majority of participants wrote to peers ($n = 51$, 63%), then parents ($n = 28$, 35%), with only 2 participants writing to a non-parent authority figure.

Results

Effect of Culture and Support Context on Psychological Stress Response

To assess a psychological stress response, we calculated change scores by subtracting the baseline PANAS negative mood score (10 items; $\alpha = .83$) from the postchallenge PANAS negative mood score (10 items; $\alpha = .88$). Larger change scores indicate a greater increase in negative mood during the lab stressor tasks. Asian Americans (AAs; $M = 0.73$, $SD = 0.91$)[1] and European Americans (EAs; $M = 0.52$, $SD = 0.45$) did not differ on psychological stress response, $t(77) = -1.30$, $p = .198$. The negative mood change score was marginally correlated with the behavioral distress variable, $r(80) = .21$, $p = .059$, but was not significantly associated with the cortisol reactivity variable, $r(56) = .16$, $p = .234$.

We conducted a 2 (cultural group: Asian American vs. European American) × 2 (support condition: mutual vs. non-mutual) analysis of covariance (ANCOVA) to examine change in psychological distress. Controlling for sex and age, we found a significant interaction, $F(1, 69) = 9.82$, $p = .003$, $\eta_p^2 = .133$ (see Figure 1). To determine whether the interaction reflected the hypothesized patterns, we conducted planned comparisons for each cultural group. We had predicted that AAs would experience less distress when seeking support from a person who they had previously provided support to (mutual), compared with a person who they had previously received support from (non-mutual). Findings support this hypothesis, showing that AAs in the mutual condition
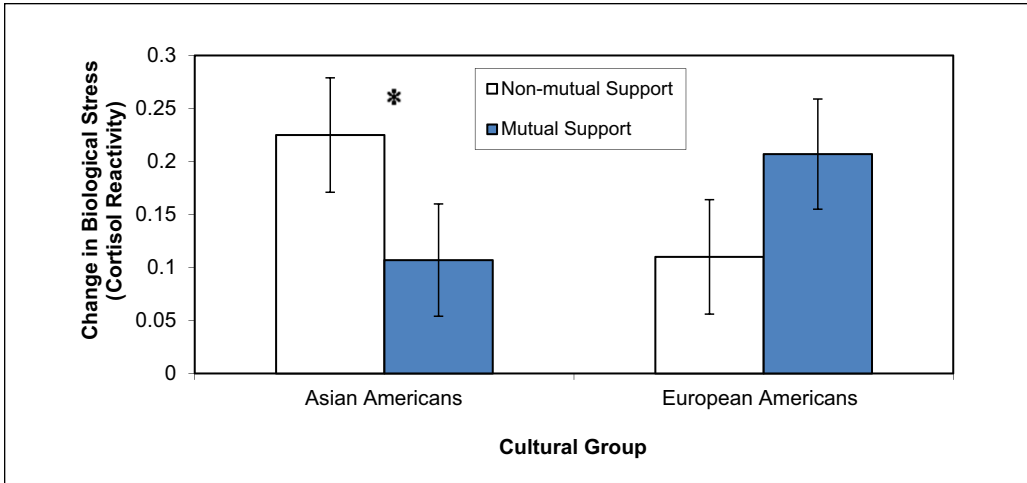
Figure 2. Change in biological stress (cortisol reactivity) from baseline to postchallenge as a function of cultural group and support condition.
*$p \leq .05$

($M = 0.58$, $SD = 0.64$) experienced less psychological distress than those in the non-mutual condition did ($M = 0.88$, $SD = 1.08$).[2] Planned comparisons using the least significant difference (LSD) test revealed that the difference between the two conditions for AAs was significant ($p = .011$). Although we did not expect to find an effect of support condition on psychological distress for EAs, planned comparisons showed that EAs in the mutual ($M = 0.61$, $SD = 0.49$) compared with non-mutual ($M = 0.41$, $SD = 0.39$) condition experienced a marginally ($p = .095$) greater increase in negative mood.

### Effect of Culture and Support Context on Cortisol Reactivity

We computed a cortisol stress response by subtracting the baseline cortisol from the postchallenge cortisol, using logged values to normalize the data. There were no significant group differences between AAs ($M = 0.13$, $SD = 0.23$)[3] and EAs ($M = 0.15$, $SD = 0.21$) on cortisol reactivity, $t(55) = -0.29$, $p = .772$. Cortisol reactivity was not significantly associated with change in negative mood, $r(56) = .16$, $p = .234$, but shared a significant correlation with behavioral distress, $r(57) = .34$, $p = .009$.

Again, we conducted a 2 (cultural group: Asian American vs. European American) × 2 (support condition: mutual vs. non-mutual) ANCOVA to examine participants' cortisol reactivity to the lab stressor tasks. Controlling for sex and age, we found a significant interaction, $F(1, 57) = 4.18$, $p = .046$, $\eta_p^2 = .074$ (see Figure 2). According to hypothesis, AAs experienced less cortisol reactivity in the mutual condition ($M = 0.08$, $SD = 0.24$) versus the non-mutual condition ($M = 0.22$, $SD = 0.27$),[4] which planned comparisons using LSD showed to be significant ($p = .033$). This was not demonstrated for EAs whose cortisol reactivity in the mutual ($M = 0.20$, $SD = 0.23$) compared with non-mutual condition ($M = 0.14$, $SD = 0.26$) was not significantly different ($p = .492$).

Effect of Culture and Support Context on Behavioral Distress

The coded anxious behavior scores during the speech task were used as a measure of behavioral distress. Asian Americans scored marginally higher ($M = 2.73$, $SD = 0.90$)[5] than European
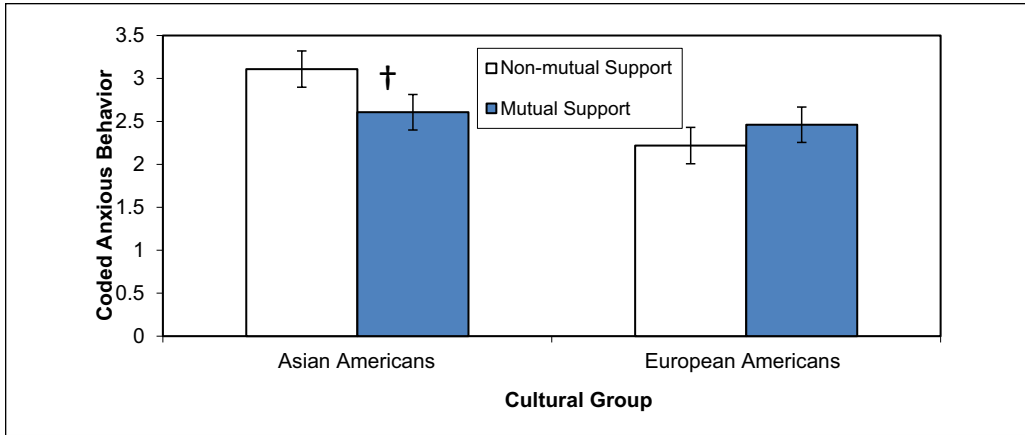
Figure 3. Coded anxious behavior during speech task as a function of cultural group and support condition.
†$p \leq .10$

Americans ($M = 2.38$, $SD = 0.98$) on observed anxious behaviors, $t(79) = -1.71$, $p = .091$. Behavioral distress was significantly correlated with cortisol reactivity, $r(57) = .34$, $p = .009$, and marginally linked with change in negative mood, $r(80) = .21$, $p = .059$.

We conducted a 2 (cultural group: Asian American vs. European American) × 2 (support condition: mutual vs. non-mutual) ANCOVA to examine participants' coded anxious behavior. Controlling for sex and age, there was a marginally significant interaction, $F(1, 81) = 3.20$, $p = .078$, $\eta_p^2 = .041$ (see Figure 3). AAs displayed less anxious behavior in the mutual condition ($M = 2.52$, $SD = 0.75$) compared with the non-mutual condition ($M = 3.10$, $SD = 1.07$),[6] which planned comparisons using the LSD test showed to be marginally significant ($p = .096$). European Americans did not display significantly different amounts of anxious behavior (non-mutual $M = 2.30$, $SD = 1.13$; mutual $M = 2.48$, $SD = 0.81$; $p = .418$).

Culture and the Close Other

We coded the relationship with the person whom participants wrote to for support as being a parent, a non-parent authority figure, or a peer. For the EA sample, 21 (52.5%) wrote to a parent, 19 wrote to a peer (47.5%), and none wrote to a non-parent authority figure. For the AA sample, 7 (17%) wrote to a parent, 32 wrote to a peer (78%), and 2 wrote to a non-parent authority figure (5%). A chi-square test of independence and percentage deviation statistics were computed to examine patterns in the co-occurrence of cultural group and support relationship type. Given that non-parent authority figures were so seldom coded, a 2 (cultural group: Asian American vs. European American) × 2 (support relationship type: Parent vs. Peer) chi-square test was computed. Findings show that support relationship type depended on the cultural group, $\chi^2(1, N = 79) = 8.85$, $p = .003$, such that AAs wrote to peers more frequently (+25.1%) and parents less frequently (−45.7%) than would be expected by chance alone. On the contrary, EAs wrote to parents more frequently (+41.2%) and peers less frequently (−24.5%) than expected by chance.

Discussion

Based on culture and relationship theory, we had predicted that explicit support seeking would be experienced differently by Asian Americans and European Americans faced with a laboratory

stressor, depending on whether the support was drawn within a relationship perceived as mutual and interdependent (i.e., the participant had previously provided support to the relationship partner) or non-mutual (i.e., the participant had previously received support from the relationship partner). Specifically, we expected Asian Americans to experience the support as less stressful and more helpful—psychologically, biologically, behaviorally—when primed to view the support as mutual (vs. non-mutual). For European Americans, we expected there to be no difference between the two support conditions. We found support for our hypotheses across all three indicators of psychological (i.e., mood), biological (i.e., cortisol), and behavioral (i.e., coded anxious behavior) stress responses.

Our Asian American participants were less distressed by a lab stressor when they recruited support from a relationship that they construed as mutual and interdependent. This pattern of findings extends prior research documenting that compared with European Americans, Asian Americans seek support less frequently (Taylor et al., 2004; Wang et al., 2010), find support to be less helpful (Kim et al., 2006; Wang et al., 2010), and experience the explicit recruitment of support to be more psychologically and biologically stressful (Taylor et al., 2007). We have uncovered a potential boundary to this set of findings, namely, that the distressing nature of explicit support seeking is buffered by the perception of mutuality in a relationship for Asian Americans. Thus, the act of reflecting on how one has contributed to the welfare of the social bond and the supportive other appears to be protective against the potential relational costs of seeking support. This reinforces the dynamic process of restoring and preserving interpersonal harmony that is a key cultural value for relationships in collectivistic contexts (Wang et al., 2010), and may represent a long-term responsiveness to the relationship partner's needs that characterizes communal relationships more strongly emphasized in Asian cultures (Miller et al., 2014).

For European Americans, we observed that—consistent with predictions—the recruitment of support led to similar psychological, biological, and behavioral stress responses regardless of whether the support relationship was viewed as mutual or non-mutual. The broader context of the support relationship did not appear to substantially affect European Americans' experience of that support, similar to Mojaverian and Kim's (2013) study on solicited and unsolicited support, and consistent with cultural theory about the motivations of the independent self-construal that would prioritize the basic recruitment of support to meet one's needs over group concerns (Markus & Kitayama, 1991). Unexpectedly, a marginally significant difference on change in negative mood suggests that the non-mutual (vs. mutual) condition may actually provide slightly more benefit to European Americans. We speculate that seeking support in a relationship context where there is some assurance that support will be provided—given previous receipt of support—is more comforting to individualists whose primary support goal is simply to get support. Another possibility is that recollections of times when others have supported the self may reinforce self-esteem as evidence that one is worthy of care (Leary, Tambor, Terdal, & Downs, 1995). These are alternative explanations that require further research.

The manner in which we primed relationship mutuality merits discussion. We asked participants to reflect on a previous support interaction in which they were either the provider, or again, the recipient. This differs from the supportive equity studied in daily diary investigations of couple support processes (Gleason et al., 2003), in which daily provisions and receipt of support are modeled at the level of the couple after the support was transacted and do not require the level of cognitive processing reflected in the current study. Supportive equity studies attribute the benefits of equitable relationships to inherently individualistic motivations (e.g., off-setting blows to self-esteem and autonomy), which raises the complexity of how interchanged support is interpreted in different cultural frameworks. We also note that the protective benefits of supportive equity for European Americans are linked to the effects of support *after it has been transacted and counted* (i.e., the calculation of supportive equity at the couple level at the end of the day),

whereas in the current study, participants were primed to broadly reflect on mutual support (and, arguably, the interdependent nature of their relationship) at the moment they are seeking it.

Our findings raise questions about the meaning of interchanged support across different cultural construals of relationships. In an individualistic setting characterized largely by exchange rules for relationships, equity and the tallying of benefits given and received reflect on self-esteem and autonomy for the individual. However, in the midst of a collectivistic backdrop where communal relationships make up one's closest social ties, interchanged support more likely serves to restore a sense of relationship harmony and demonstrate enacted concern for the welfare of the partner and the relationship in the long term. Certainly, the present study suggests that mutual support may be construed as reflecting a cultural priority on nurturing and maintaining enduring social bonds rather than the *quid pro quo* perspective on equity that is steeped in an individualistic cultural script.

Last, we note that Asian Americans more frequently sought support from peers (a discretionary relationship) compared with parents (an obligatory relationship). These results are consistent with previous daily diary findings (Wang et al., 2010), and are also in line with experimental evidence showing that the disinclination to seek support for Asian samples increases as the relationship becomes closer to the self (e.g., in-group vs. out-group; Kim et al., 2006). It may be that concerns regarding mutual obligation and social harmony are heightened when the relationship in question is an obligatory kin relationship, for which the potential risks of seeking support are arguably greater than those from looser social ties. Disclosing a need for help by revealing personal weakness or failure may be viewed as shameful and result in loss of face. Given the long-term nature of obligatory kin relationships and the far-reaching negative consequences of relationship discord with kin, individuals may be more motivated to "save face" with kin and instead seek help from discretionary ties that, by nature, are more fluid and typically shorter term. Certainly, in communal relationships where concern for the other's welfare is key (Clark & Mills, 1979), worry that another might feel burdened or obligated by disclosing personal need would be a disincentive to seek help from closest loved ones.

Limitations and Future Directions

We note some limitations with the current study. First, we aggregated a great diversity of cultural subgroups under the category "Asian American." Although we made efforts to hone in on individuals who would likely have increased exposure to Confucian-based traditions and values (e.g., restricting the Asian American sample to first and second generation East Asian Americans), we still ultimately treated a robustly heterogeneous group with a modest sample size as a homogeneous one, yet our limited sample size was not large enough to permit investigation of differences between East Asian American cultural subgroups. And, although we could reasonably conclude that our East Asian American immigrant sample was influenced to some degree by traditional East Asian values, we cannot be sure that these findings would generalize completely to East Asians in East Asian countries, who are not also in an American cultural context.

Furthermore, we utilized a purely imaginal priming procedure which is useful for examining cognitive processes for how people view their relationships, but does not provide data on what these support behaviors actually look like. Future work that examines how expectations about mutual and non-mutual support affect actual enacted supportive interactions for different cultural groups would shed light on those processes. Indeed, the current analysis is comprised of a single study and replication is needed before strong conclusions are drawn.

Some additional limitations are conceptual in nature and pave the way for future investigations. While we have covered an intriguing cultural difference, there is more than one explanation for how our mutual support prime was processed. It may be that we invoked the cultural imperative (typical in collectivistic and communal relationships) on the smoothness of the relationship, with attention to one's contributions to fortifying that connection. However, it may be

that our prime served to bolster relational self-esteem (Heine, Lehman, Markus, & Kitayama, 1999), similar to the advantageous effects of implicit support shown for Asian Americans (Taylor et al., 2007). Perhaps the prime did both. Future work could better clarify the cultural mechanisms of mutuality in more refined detail. In addition, because the instructions were deliberately broad in telling participants to "ask for help," there was variability with regard to the kind of support sought in participants' letters, ranging from emotional reassurance to practical instrumental support. Although our preliminary descriptive analyses showed no patterns or differences among our modest sample of Asian Americans and European Americans in the kind of support that was sought, future research can more systematically investigate not only cultural variation in support type but also the effects on the individual seeking a particular kind of support.

Although the social support field has largely ignored the influence of culture in shaping support processes, a growing body of work is slowly illuminating the limitations of the dominant understanding of support, and furthering knowledge on the pathways to support that are culturally normative and effective for various groups. Continued research that recognizes and explores the diverse pathways by which individuals obtain, experience, and think about supportive relationships would add further depth and nuance to an area of relationship science that is as ubiquitous a part of the human experience as any—how we relate with others and how we use our relationships as a source of strength in the face of adversity.

Notes

1. The AA subgroup means for the Positive and Negative Affect Schedule (PANAS) negative mood change scores are as follows: first generation AA ($M = 1.09$, $SD = 0.92$) and second generation AA ($M = 0.48$, $SD = 0.80$), $t(37) = 2.20$, $p = .034$
2. The AA subgroup means for the PANAS negative mood change scores by condition are as follows: first generation AA, mutual ($M = 0.83$, $SD = 0.72$); first generation AA, non-mutual ($M = 1.43$, $SD = 1.10$); second generation AA, mutual ($M = 0.36$ $SD = 0.49$); second generation AA, non-mutual ($M = 0.58$, $SD = 0.99$).
3. The AA subgroup means for cortisol stress reactivity are as follows: first generation AA ($M = 0.18$, $SD = 0.28$) and second generation AA ($M = 0.11$, $SD = 0.27$); $t(40) = .75$, $p = .455$.
4. The AA subgroup means for cortisol stress reactivity by condition are as follows: first generation AA, mutual ($M = 0.11$, $SD = 0.12$); first generation AA, non-mutual ($M = 0.26$, $SD = 0.36$); second generation AA, mutual ($M = 0.06$ $SD = 0.27$); second generation AA, non-mutual ($M = 0.15$, $SD = 0.27$).
5. The AA subgroup means for behavioral distress are as follows: first generation AA ($M = 3.00$, $SD = 1.03$) and second generation AA ($M = 2.65$, $SD = 0.89$), $t(40) = 1.15$, $p = .257$
6. The AA subgroup means for behavioral distress by condition are as follows: first generation AA, mutual ($M = 2.67$, $SD = 0.87$); first generation AA, non-mutual ($M = 3.43$, $SD = 1.13$); second generation AA, mutual ($M = 2.42$ $SD = 0.67$); second generation AA, non-mutual ($M = 2.86$, $SD = 1.03$).

References

Bolger, N., & Amarel, D. (2007). Effects of social support visibility on adjustment to stress: Experimental evidence. *Journal of Personality and Social Psychology*, *92*, 458-475.

Bolger, N., Zuckerman, A., & Kessler, R. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology*, *79*, 953-961.

Burleson, B. R. (2003). The experience and effects of emotional support: What the study of cultural and gender differences can tell us about close relationships, emotion, and interpersonal communication. *Personal Relationships*, *10*, 1-23.

Burleson, B. R., & Mortenson, S. (2003). Explaining cultural differences in evaluations of emotional support behaviors: Exploring the mediating influences of value systems and interaction goals. *Communication Reports*, *15*, 43-55.

Chang, H. C., & Holt, G. R. (1994). A Chinese perspective on face as inter-relational concern. In S. Ting-Toomey (Ed.), *The challenge of facework: Cross-cultural and interpersonal issues* (pp. 95-132). Albany: State University of New York Press.

Chiang, J. J., Saphire-Bernstein, S., Kim, H. S., Sherman, D. K., & Taylor, S. E. (2013). Cultural differences in the link between supportive relationships and proinflammatory cytokines. *Social Psychological & Personality Science*, *4*, 511-520.

Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social Psychology*, *37*, 12-24.

Clark, M. S., & Mills, J. (1993). The difference between communal and exchange relationships: What it is and is not. *Personality and Social Psychology Bulletin*, *19*, 684-691.

Cohen, S. (2004). Social relationships and health. *American Psychologist*, *59*, 676-684.

Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin*, *130*, 355-391.

Gleason, M. E. J., Iida, M., Bolger, N., & Shrout, P. E. (2003). Supportive equity in close relationships. *Personality and Social Psychology Bulletin*, *29*, 1036-1045.

Gleason, M. E. J., Iida, M., Shrout, P. E., & Bolger, N. (2008). Receiving support as a mixed blessing: Evidence for dual effects of support on psychological outcomes. *Journal of Personality and Social Psychology*, *94*, 824-838.

Hatfield, E., & Traupmann, J. (1981). Intimate relationships: A perspective from equity theory. *Personal Relationships*, *1*, 165-178.

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*, 766-794.

Kim, H. S., Sherman, D. K., Ko, D., & Taylor, S. E. (2006). Pursuit of happiness and pursuit of harmony: Culture, relationships, and social support seeking. *Personality and Social Psychology Bulletin*, *32*, 1595-1607.

Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist*, *63*, 518-526.

Kirschbaum, C., Pirke, K., & Hellhammer, D. H. (1993). The Trier Social Stress Test—A tool for investigating psychobiological stress responses in a laboratory setting. *Neuropsychobiology*, *28*, 983-992.

Kudielka, B. M., Schommer, N. C., Hellhammer, D. H., & Kirschbaum, C. (2004). Acute HPA axis responses, heart rate, and mood changes to psychosocial stress (TSST) in humans at different times of day. *Psychoneuroendocrinology*, *28*, 983-992.

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, *68*, 518-530.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253.

Miller, J. G., Bland, C., Kallberg-Shroff, M., Tseng, C.-Y., Montes-George, J., Ryan, K., . . . Chakravarthy, S. (2014). Culture and the role of exchange vs. communal norms in friendship. *Journal of Experimental Social Psychology*, *53*, 79-93.

Miller, J. G., Das, R., & Chakravarthy, S. (2011). Culture and the role of choice in agency. *Journal of Personality and Social Psychology*, *101*, 46-61.

Mojaverian, T., & Kim, H. S. (2013). Interpreting a helping hand: Cultural variation in the effectiveness of solicited and unsolicited social support. *Personality and Social Psychology Bulletin*, *39*, 88-99.

Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices emphasize influence in the U.S. and adjustment in Japan. *Personality and Social Psychology Bulletin*, *28*, 311-323.

Mortenson, S. (2006). Cultural differences and similarities in seeking social support as a response to academic failure: A comparison of American and Chinese college students. *Communication Education*, *55*, 127-147.

Mortenson, S., Liu, M., Burleson, B. R., & Liu, Y. (2006). A fluency of feeling: Exploring cultural and individual differences (and similarities) related to skilled emotional support. *Journal of Cross-Cultural Psychology*, *37*, 366-385.

Okazaki, S., Liu, J. F., Longworth, S. L., & Minn, J. Y. (2002). Asian American—White American differences in expressions of social anxiety: A replication and extension. *Cultural Diversity & Ethnic Minority Psychology*, *8*, 234-247.

Seeman, T. E. (1996). Social ties and health: The Benefits of social integration. *Annals of Epidemiology*, *6*, 442-451.

Taylor, S. E. (2007). Social support. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 145-171). New York, NY: Oxford University Press.

Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology*, *87*, 354-362.

Taylor, S. E., Welch, W. T., Kim, H. S., & Sherman, D. K. (2007). Cultural differences in the impact of social support on psychological and biological stress responses. *Psychological Science*, *18*, 831-837.

Triandis, H. C. (1994). *Culture and social behavior*. New York, NY: McGraw-Hill.

Uchino, B. N. (2009). Understanding the links between social support and physical health. *Perspectives on Psychological Science*, *4*, 236-255.

Wang, S., Shih, J. H., Hu, A. W., Louie, J. Y., & Lau, A. S. (2010). Cultural differences in daily support experiences. *Cultural Diversity & Ethnic Minority Psychology*, *16*, 413-420.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070.