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My Mother and Me: Why Tiger Mothers Motivate Asian Americans But Not European Americans

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Abstract

"Tiger Mother" Amy Chua provoked a culture clash with her claim that controlling parenting in Asian American (AA) contexts produces more successful children than permissive parenting in European American (EA) contexts. At the heart of this controversy is a difference in the normative models of self that guide behavior. Ideas and practices prevalent in AA contexts emphasize that the person is and should be *interdependent* with one's close others, especially one's mother. In contrast, EA contexts emphasize the person as *independent*, even from one's mother. We find that AA compared with EA high school students experience more interdependence with their mothers and pressure from them, but that the pressure does not strain their relationship with their mothers. Furthermore, following failure, AAs compared with EAs are more motivated by their mothers, and AAs are particularly motivated by pressure from their mothers when it conveys interdependence.

Keywords

culture, motivation, interdependence, academic achievement

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> I looked at the test question and drew a blank. "Then I heard your annoying voice in my head, saying, 'Keep thinking! I know you can do this'—and the answer just came to me."
>
> —Lulu Chua, *Time*, 1/31/2011

In January 2011, Amy Chua, a Yale law professor and self-proclaimed "Tiger Mother," grabbed headlines depicting a model of parenting that she claimed produces children who excel—a Chinese model of parenting (Chua, 2011b). According to Chua (2011a), "Tiger Mothers" are deeply involved in their children's achievement and pressure them to succeed, particularly when they fail. For example, when Chua's 7-year-old daughter, Lulu, struggled to master a difficult piano piece, Chua put pressure on her daughter by requiring her to practice without breaks. Moreover, Chua sat and worked with her for hours until Lulu could play the piece perfectly.

Many parents angrily denounced these "Tiger Mother" practices, arguing that they would produce resentment and quash individual drive (Deal, 2011). Others, however, applauded her approach.[1] According to a *Wall Street Journal* poll (2011), 62.3% of responders thought the highly involved Tiger Mothering was better for children than the more permissive Western parenting. These conflicting reactions highlight a growing controversy in multicultural communities on the role of parents in children's achievement (e.g., Chao, 1994; Chao & Tseng, 2002; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; S. Y. Kim, Wang, Orozco-Lapray, Shen, & Murtuza, 2013).

Given the dilemma of a child who is struggling and not succeeding—and the challenge of how to maintain motivation in the face of failure—we propose that Chua and her critics are both right. At the heart of this controversy is a clash between the underlying models of self that are prevalent in Asian American (AA)[2] contexts and those that are prevalent in European American (EA) cultural contexts. These models are rooted in divergent cultural assumptions about the role of others in the self and provide different guidelines for the normatively appropriate role of parents when their child fails. Depending on the model of self that is prevalent in a context, pressure by parents can take on different meanings and consequences. To reveal this clash of underlying assumptions, across four studies we compared how AA and EA students construe their relationship with their mothers and how pressure by mothers influences this relationship. We also directly examined whether after a challenging academic task mothers are more motivating for AA than for EA students, and whether the nature of the

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relationship between AAs and their mothers could explain their motivation.

In AA cultural contexts, the normatively appropriate person is understood as necessarily connected with one's close others (Markus & Kitayama, 1991, 2010), especially with one's mother (e.g., Qi Wang, 2006). From the perspective of this *interdependent* model of self, motivation and appropriate action stem from paying attention to and adjusting to close others (Kitayama, Duffy, & Uchida, 2007; Li, 2012; Markus & Kitayama, 2003; Plaut & Markus, 2005). Thus, parents in AA contexts direct their children to recognize their fundamental connectedness to others and to fulfill their obligations to them (Chao & Tseng, 2002; Qi Wang, 2001). Chief among these obligations is meeting standards and becoming an educated person so as to provide for the family and to contribute to society (Chao, 1995; Fryberg & Markus, 2007; Li, 2012; Qian Wang & Pomerantz, 2009).

In contrast, in EA cultural contexts, particularly in middle-class EA contexts, the normatively appropriate person is understood as separate from one's close others (Markus & Kitayama, 1991), even from one's mother (e.g., Qi Wang, 2006). From the perspective of this *independent* model of self, motivation and appropriate action stem from personal preferences and goals; people should be wary of the influence of others, even close others, and are often uncomfortable with accepting others' decisions for themselves (Li, 2012; Markus & Kitayama, 2003). Thus, parents in EA contexts encourage children to individuate themselves and to develop their own thoughts and feelings. A signature of becoming a successful individual is the ability to confront challenges and to motivate one's self without undue reliance on others (Chao & Tseng, 2002; Qi Wang, 2001).

Depending on the model of self that is organizing action, the experience of pressure by mothers can take on different meanings. In AA contexts, given the cultural emphasis on interdependence, parents actively guide their children to meet expectations, and they push them to succeed, particularly in school. In turn, even in adolescence, children expect their parents to be involved in their lives, and they take up their parents' goals for themselves as their own (Chao, 1995; Li, 2012; Ng, Pomerantz, & Lam, 2007). Thus, when children struggle, pressure by parents may not always produce resentment. In fact, at the point of failure, pressure that comes in the form of involvement by parents, especially by mothers, may become an additional resource that children can draw on to fuel their motivation for the task at hand.

In contrast, in EA contexts, given the cultural emphasis on independence, parents encourage their children to make their own decisions, and they give their children space to develop themselves as individuals. Especially in adolescence, children seek separation from their parents and often resist parental involvement and influence (Chao, 1995; Qi Wang, 2001). Thus, when children struggle, if their parents apply pressure, they may experience this pressure as negative, that is, as a lack of support. In fact, at the point of failure, involvement by parents, especially by mothers, may be experienced as a drag on motivation for the task at hand.

The current research builds on and extends several distinct lines of research on the role of parents in their children's achievement. For example, AA students are more likely than EA students to report experiencing higher parental standards (Chen & Stevenson, 1995). Yet while "authoritarian" parenting (i.e., pressure from parents) is associated with worse grade outcomes for EA students, this is not the case for AA students (Dornbusch et al., 1987). In fact, AA compared with EA children are more motivated on a task their mothers chose for them than on one they chose for themselves (Iyengar & Lepper, 1999). Furthermore, according to Chao (1994), what can be seen by the West as harsh parenting is often understood in the East, by parents and children alike, as love and care.

We focus here on *young adults* in high school, a period of time that puts the relationship between students and their parents in high relief. In American middle-class contexts, adolescence is often marked by a rejection of parental involvement as a way to separate from parents and become autonomous (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985). This desire to assert one's independence is particularly salient during the high school years when students are still living at home with their parents and not fully independent. In AA contexts, however, successful adolescence does not require breaking away from parents, and students may be less likely to construct a sharp boundary separating themselves from their parents. Instead, this period of time is marked by the recognition of a changing yet still enduring relationship with their mothers.

We also focus here on the role of mothers in their children's achievement following failure, because mothers are typically the caregivers who are heavily involved in their children's upbringing and their academic achievement (Chao, 1995; Ng et al., 2007; Qi Wang, 2006). Consistent with research showing that people in interdependent contexts do not experience their close others' influence as constraining (J. G. Miller & Bersoff, 1994; Savani, Morris, & Naidu, 2012), we anticipate that AA high school students will not experience pressure by mothers as at odds with being interdependent and so thinking about their mothers, including their mother's pressure, will not undermine motivation. In contrast, we expect that EA high school students will experience pressure as at odds with being independent, and thinking about their mothers may undermine motivation.

In four studies using different indirect measures of interdependence[3] and pressure, we examined if AA compared with EA high school students experience themselves as interdependent with their mothers (Studies 1 and 2) and whether they experience perceived pressure by their mothers as negative (Study 2). Next, we directly tested whether mothers are differentially effective in motivating their (nearly adult) children after failure (i.e., after a challenging academic task; Study 3a). Finally, we tested whether for AAs interdependence with their

mothers moderates the relationship between pressure and persistence after failure (Study 3b).

We hypothesize that AAs compared with EAs will experience themselves as more interdependent with their mothers and that they will also experience more pressure by their mothers. AAs, however, will be less likely to experience this pressure as negative. Moreover, following failure, AAs compared with EAs will be more motivated by their mothers. Finally, among AAs, pressure by their mothers will be most motivating when the pressure conveys interdependence.

Study 1—My Mother and I Are One

In Study 1, we probed students' interdependence with their mothers by asking students for open-ended descriptions of their mothers. We made the novel prediction that, reflecting their interdependence with their mothers, AAs would be more likely than EAs to characterize their mothers' relationship with them (i.e., their mothers' involvement in their lives) as part of their description of their mothers. In contrast, we expect that, reflecting their independence from their mothers, EAs would be more likely than AAs to see their mothers as separate from them and so to focus on their mothers' attributes and preferences.

Method

Eighty-three students (52 AAs, 31 EAs, 44 males, *M* age = 16.4 years) from a northern California high school participated in the study. Seventy-three of the students were from a middle-class background. Students were considered middle class if they had at least one parent who had obtained a 4-year college degree. Sixty percent of AAs were born in the United States. AA students who were not born in the United States had spent an average of 10.2 years in the United States.

Students were told that the purpose of the study was to examine the academic and social experiences of high school students and that participants would answer questions about themselves and others who are close to them. They were told that they were randomly assigned to a task in which they would be asked to describe their mothers. They were given the prompt, "Describe your mom in a couple of sentences." After this task, participants were given a set of filler questions about their experiences in the classroom, such as belonging in school.

Two research assistants blind to hypotheses and participants' cultural background coded the descriptions of the mothers. First, they coded each response for whether participants mentioned positive and/or negative aspects of their mothers. Next, they coded each response for any mention of two theoretically derived categories: (1) mention of the mother's involvement in the participant's life (e.g., "She helps and advises me on homework") and (2) mention of the mother's attributes, specifically (a) her physical appearance (e.g., height, hair color) or (b) her preferences (see Table 1).

Results

As predicted, when describing their mothers, AAs were more likely than EAs to mention their mother's relationship with them. Specifically, AAs were more likely to describe their mother's involvement in their lives, $\chi^2(1, N = 83) = 4.33$, $p = .04$ (see Table 1). In contrast, and also as predicted, EAs were more likely than AAs to characterize their mothers in terms of her attributes. They were more likely to describe their mother's physical appearance, $\chi^2(1, N = 83) = 5.18$, $p = .02$, and their mother's preferences, $\chi^2(1, N = 83) = 4.45$, $p = .04$.

Notably, AAs and EAs did not differ in the valence of their mother descriptions. They were equally likely to describe their mothers positively, $\chi^2(1, N = 83) = .29$, $p = .59$, and negatively, $\chi^2(1, N = 83) = .65$, $p = .42$. Moreover, both groups were more likely to describe their mothers positively (86.5% of respondents) than negatively (37% of respondents).

Two other categories that we did not predict emerged in the descriptions of the mothers. These included mention of mothers as *a source of pressure* and mention of mothers as *a source of support*. AAs were more likely than EAs to describe their mothers as a source of pressure (e.g., "She can be hard on me"), $\chi^2(1, N = 83) = 4.51$, $p = .03$. However, AAs and EAs were equally likely to describe their mothers as a source of support (e.g., "She's always there for me"), $\chi^2(1, N = 83) = .10$, p = .76 (see Table 1).

Discussion

This study drew on high school students' descriptions of their mothers to index their relative interdependence with their mothers. Reflecting their greater hypothesized interdependence, when AAs describe their mothers, they are more likely than EAs to characterize their mother's relationship with them, reflecting the understanding that their mothers are connected to them. EAs, on the other hand, reflecting their greater hypothesized independence, do not reference the relationships their mothers have with them and instead describe their mother's attributes, preferences, and physical characteristics—reflecting their understanding that their mothers are people who are separate from them. Furthermore, AAs are more likely than EAs to describe their mothers as exerting pressure on them. However, the two groups of students do not differ in their positive mentions of their mothers and in their mentions of their mothers as support, suggesting that the pressure AAs experience by their mothers may not be seen as negative.

Study 2—My Mother and I Are Interdependent: Pressure Is Not Negative

In Study 2, we used different measures to assess students' interdependence with their mothers and how they experience

Table 1. Coding Categories of Descriptions of Mother and Percentage of Participants by Culture.

Coding categories	Examples	κ	AAs (%)	EAs (%)	χ^2
Valence of mother descriptions					
Positive	"She has a very loving heart and loves to help people in need" "She's very sweet and she's kind, caring, and patient"	.73	83	87	0.29
Negative	"She also has a bit of a temper" "She can be rude and annoying"	.77	31	23	0.65
Mother's interdependence with child					
Involvement	"She helps and advises me on assignments and activities relating to school" "She taught me how to take care of myself"	.82	19	3	4.33*
Mother's independent attributes					
Physical appearance	"Fairly average height, brown hair" "My mom is 5'2 and has brown eyes"	.88	6	23	5.18*
Preferences	"Likes all animals" "She likes to read and eat"	.60	15	35	4.45*
Mother's pressure on child					
Pressure	"She's caring though can be hard on me at times" "Supportive, yet sometimes expects too much"	.61	25	6	4.51*
Mother's support of child					
Support	"She is a caring person and supports me in whatever I do" "Always there for me"	.78	15	13	0.10

Note. AA = Asian American; EA = European American.
*$p < .05$.

pressure by their mothers. To assess interdependence, we asked students to rate how connected they felt with their mothers and how much they accepted their mother's involvement in their lives. We predict that AAs compared with EAs will report greater interdependence with their mothers.

We also asked students to directly rate how much pressure they experience from their mothers. Then, to assess whether students experience this pressure by mothers as negative, we asked participants to rate how much they experience support by their mothers and examined the correlation between students' experience of their mothers as pressure and their experience of their mothers as support. Though we expect as found in Study 1 that AAs compared with EAs will report experiencing greater pressure from their mothers, we predict that, unlike EAs, they will not experience this pressure as negative. Specifically, AAs will not experience pressure by their mothers as a lack of support, that is, they will not report a negative correlation between experiencing pressure and support by their mothers. In contrast, for EAs, this correlation will be negative, indicating that they experience pressure by their mothers as negative.

Method

Sixty-one high school students (32 AAs, 29 EAs, 34 males, *M* age = 15.9 years) from a northern California high school participated in this study. Fifty-six participants were from a middle-class background. Sixty-nine percent of AAs had been born in the United States, and AA students who were not born in the United States had spent an average of 11.7 years in the United States.

Participants were told that the purpose of this study was to examine factors that affect how they learn in high school, including the influence of others who are close to them. Participants answered a questionnaire about their mothers and their relationship with them along with filler questionnaires about their belonging in school and theories of intelligence. At the end of the study, they answered a demographics questionnaire.

Interdependence with mother

Connection with mother. To measure how connected students felt with their mothers, we used two separate sets of items: (1) how much students felt that their selves and their mother's selves overlapped and (2) how much they felt they and their mothers understood each other.

To measure how much students felt they and their mothers overlapped, we used an adapted version of the Inclusion of Other in the Self Scale (Aron, Aron, & Smollan, 1992). Participants were given a series of two progressively overlapping circles (from 1 = *no overlap* to 7 = *almost complete overlap*) that represented themselves and their mothers, and they were asked to indicate which pair represented their actual relationship with their mothers.

To measure perceived mutual understanding between themselves and their mothers, participants answered two items that asked *To what extent do you understand your mother* and *To what extent does your mother understand you*. They answered these questions on 100-point scales (from 0 = *not at all* to 100 = *completely*), and we averaged the two items together to create an index of perceived understanding between their mothers and themselves (α = .67).

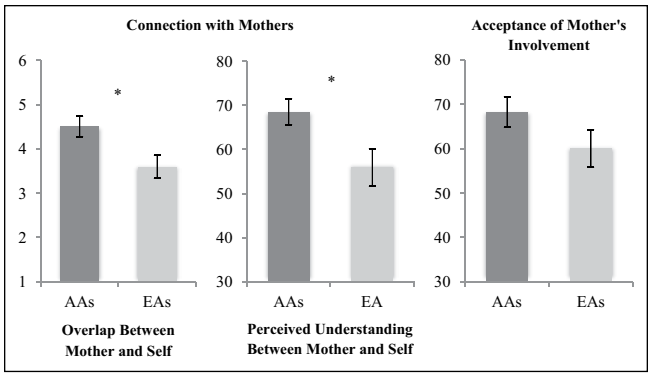

Figure 1. Mean interdependence with mother by culture.
*$p < .05$

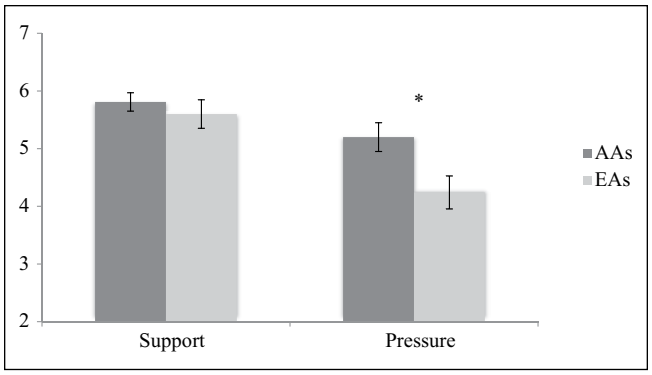

Figure 2. Mean perceived pressure and support by mother by culture.
*$p < .05$

Acceptance of mother's involvement. We measured acceptance of their mother's involvement in their lives using three items that we averaged together to create a single index (α = .77). The items were *To what extent do you trust your mother to make decisions for you, How comfortable are you with accepting your mother's decisions for you*, and *How involved is your mother in your life*. These items were rated on 100-point scales from 0 = *not at all* to 100 = *completely*.

Experience of pressure by mother. Pressure was measured using two items that were averaged together to create one index (α = .80). These two items were *How much* pressure *do you feel from your mother* and *How* stressed *do you feel because of your mother*. They were rated using 7-point scales (from 1 = *not at all* to 7 = *extremely*).

To measure how students experienced pressure by mothers, we examined the relationship between pressure and support by their mothers. Support was measured using three items that were averaged together to create one index (α = .70). These three items were *How* supportive *is your mother of you, How* caring *is your mother of you*, and *How much do you* trust *your mother*. They were rated using 7-point scales (from 1 = *not at all* to 7 = *extremely*).

Results

Confirming hypotheses, AAs compared with EAs reported experiencing greater interdependence with their mothers. Specifically, AAs reported feeling more connected with their mothers: They reported greater overlap between themselves and their mother's selves, $t(59) = -2.62$, $p = .01$, $d = .67$, and greater understanding between themselves and their mothers, $t(57) = -2.42$, $p = .02$, $d = .63$ (see Figure 1). They also reported more acceptance of their mother's involvement in their lives, though this difference was not significant, $t(57) = -1.50$, $p = .14$.

AAs also reported experiencing greater pressure by their mothers, $t(59) = -2.54$, $p = .01$, $d = .65$ (see Figure 2). Consistent with Study 1, AAs and EAs reported experiencing similar levels of overall support by their mother, $t(59) = -.75$, $p = .46$.[4]

Next we examined the correlation between pressure and support by their mothers to assess how students experienced pressure by their mothers. As predicted, AAs reported no relationship between feeling pressure and support from their mothers, $r(30) = .06$, $p = .73$. In contrast, we found that EAs experienced pressure from their mothers as negative. Specifically, EAs reported that the more pressure they felt from their mothers, the less they felt supported by them, $r(27) = -.35$, $p = .06$. Regression analyses confirmed this difference between the correlations. A linear regression revealed a marginally significant interaction between culture and pressure (mean-centered) on support (mean-centered), $b = -.35$, $SE_b = .19$, $\beta = -.48$, $p = .08$.

Additional analyses revealed a similar pattern of correlations between ratings of pressure and ratings of interdependence with their mothers, specifically mutual understanding with them. Notably, we found that AAs reported no relationship between feeling pressure from their mothers and mutual understanding with their mothers, $r(30) = -.16$, $p = .37$. EAs, however, reported that the more pressure they felt from their mothers, the less they felt interdependent with them. Specifically, they were less likely to feel that their mothers understood them, $r(25) = -.56$, $p = .003$. Regression analyses revealed a marginally significant interaction between culture and pressure (mean-centered) predicting mutual understanding between mothers and selves (mean-centered), $b = -6.32$, $SE_b = 3.33$, $\beta = -.47$, $p = .06$.

Discussion

Study 2 used direct measures to assess students' interdependence with their mothers and experience of pressure by their mothers. AAs are more likely than EAs to see themselves as interdependent with their mothers, specifically as connected with their mothers. AAs are also more likely than EAs to report experiencing pressure by their mothers, but reflecting their relative interdependence, they do not experience this pressure negatively, that is, as a lack of support or a lack of

interdependence. Notably, AAs report experiencing similar levels of support by their mothers as EAs do.

While EAs are less likely compared with AAs to report experiencing pressure from their mothers, when they do experience pressure, they see it as a sign that their mothers do not support them. Moreover, unlike AAs, the more EAs experience pressure by their mothers, the more they assert their independence: They are less likely to feel that their mothers understand them. These results suggest that interdependence and pressure by mothers have different meanings for EAs than for AAs.

In Studies 3a and 3b, we directly examined whether mothers and pressure from them can be motivating. Specifically, we manipulated how thinking about their mothers during a challenging academic task can motivate or demotivate AAs and EAs, and whether pressure from mothers motivates AAs due to their interdependence with them.

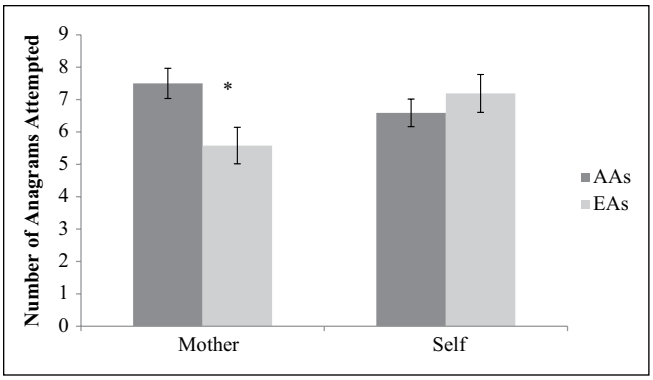

Figure 3. Motivation: Mean number of attempted anagrams by culture and condition.
*$p < .05$

Study 3a—My Mother Motivates Me After Failure

In Study 3a, we designed an experiment to capture how thinking about their mothers would impact students' motivation after a failure experience. Following a challenging academic task, students were subtly induced either to think about their mothers or about themselves. We reasoned that AAs would experience greater motivation than EAs after thinking about their mothers.

Method

One hundred and seventeen high school students (67 AAs, 50 EAs, 64 males, *M* age = 16.4 years) from a northern California high school participated in this study. One hundred and four participants were from a middle-class background. Sixty-nine percent of AAs had been born in the United States, and AAs who were not born in the United States had spent on average 12.0 years in the United States.

Students were told that the study was about the academic and social experiences of high school students and that they would be randomly assigned to complete a word puzzle task and a task that would require them to think about themselves and others who are close to them.

We used the word puzzle task to create a failure experience for participants. The word puzzle task was a difficult anagrams task that required rearranging the letters of a target word to form a new word. Participants were presented with a series of 12 anagrams, and they had 5 minutes to solve as many as they could. After they completed the anagrams task, they were given false feedback that "you have scored WELL BELOW AVERAGE." On average, participants solved very few anagrams ($M = 1.24$, $SD = 1.22$). Participants also reported feeling displeased with their performance ($M = 2.24$, $SD = 1.51$), using a scale from 1 (*extremely displeased*) to 7 (*extremely pleased*), and that they felt they did badly on the task ($M = 1.89$, $SD = 1.41$), using a scale from 1 (*extremely badly*) to 7 (*extremely well*). These responses indicated that participants found the task to be difficult.

After the failure experience, we used a subtle manipulation to direct participants' attention to their mothers or to themselves. Specifically, we presented them with a prompt to "Describe your mom in a couple of sentences" or to "Describe yourself in a couple of sentences." After they wrote one of these two descriptions, they were given a second set of difficult anagrams. We measured their motivation on this task by summing the number of anagrams that participants attempted. Given that the task was chosen to be very difficult, we did not expect much variation in participants' performance on the task (Hamedani, Markus, & Fu, 2013).

Results

Confirming hypotheses, a two-way analysis of variance (ANOVA) revealed a significant interaction between culture and condition (mother vs. self) on motivation, $F(1, 113) = 6.12$, $p = .01$. After thinking about their mothers, AAs ($M = 7.50$, $SD = 2.56$) compared with EAs ($M = 5.58$, $SD = 2.76$) attempted significantly more anagrams, $t(52) = -2.64$, $p = .01$, $d = .72$ (see Figure 3). Within group, EAs attempted significantly fewer anagrams after thinking about their mothers compared with thinking about themselves ($M = 6.59$, $SD = 2.60$), $t(48) = 1.97$, $p = .05$, $d = -.38$, while AAs were similarly motivated when thinking about themselves ($M = 7.19$, $SD = 2.98$) or their mothers, $t(65) = -1.43$, $p = .16$.[5]

We found a similar interaction for performance as we did for persistence, $F(1, 113) = 2.01$, $p = .16$, though, as expected, the interaction was not significant. After thinking about their mothers, AAs ($M = 3.17$, $SD = 1.88$) compared with EAs ($M = 2.38$, $SD = 1.17$) solved more anagrams, $t(52) = -1.80$, $p = .08$. EAs were also more likely to solve anagrams correctly when they thought about themselves ($M = 3.19$, $SD = 1.41$) than when they thought about their mothers, $t(48) = 2.21$, $p = .03$. AAs did not differ in how many anagrams they solved after thinking about themselves ($M = 3.16$, $SD = 1.55$) compared with when they thought about their mothers, $t(65) = -.01$, $p = .99$.

Discussion

In Study 3a, we tested Tiger Mother's claim and found evidence that supports both her claims and the claims of her critics. Thinking about their mothers motivated AAs after experiencing a failure. In contrast, EAs who thought about their mothers experienced a drag on their motivation. Perhaps reflecting their interdependent tendencies to include their mothers in themselves, AAs are able to draw on both their mothers and themselves as resources to maintain motivation after failure. For EAs, however, reflecting their independent tendencies to resist the influence of others, thinking about their mothers impairs their motivation.

Notably, despite the difficulty of the task, participants' performance mirrors their pattern of persistence. Just as AAs maintain their motivation after thinking about their mothers compared with themselves, their performance does not decrease after thinking about their mothers. In contrast, EAs experience not only a decrease in persistence after thinking about their mothers compared with thinking about themselves, but also a drop in performance. This finding provides some evidence that the involved parenting style of AA mothers may keep their AA children focused on the task at hand as well as help them to achieve success.

The results of this study imply that pressure by mothers can motivate AAs because they feel interdependent with their mothers. This study, however, did not directly examine whether for AAs this interdependence moderates the relationship between pressure and persistence. Study 3b was designed to focus on this question.

Study 3b—Interdependent Pressure By My AA Mother Motivates Me After Failure

Together Studies 1 to 3a suggest that for AAs pressure by mothers could motivate them after failure. We do not assume, however, that any type of pressure by their mothers would motivate AAs. In fact, we predict that, for pressure by their mothers to be motivationally effective, it should take an interdependent form. That is, the pressure should reflect their mother's connection and relationship with them. Thus, the goal of study 3b is to examine whether, as hypothesized, pressure by mothers can indeed motivate AAs due to their interdependence with their mothers.

We designed an experiment to test the prediction that following failure, pressure by their mothers would motivate AAs if the pressure also signals interdependence with their mothers (e.g., if the mother's pressure comes in the form of involvement in their academic achievement). To test this question, we again created a failure experience for participants, then asked students to recall a time when their mothers put pressure on them and either worked alongside them (i.e., interdependent pressure) or put pressure on them but did not work alongside them (i.e., independent pressure). We then measured their subsequent motivation and how interdependent they felt with their mothers.

We predict that following failure, AAs will experience greater motivation when they recall an instance of interdependent pressure by their mothers compared with when they recall an instance of independent pressure. Furthermore, we expect that students' ratings of interdependence with their mothers will predict their persistence, but only in the case that pressure by their mothers signals their mothers' interdependence with them, that is, when they experience interdependent pressure by their mothers.

Method

Eighty-one AA high school students (44 males, *M* age = 16.1 years) from a northern California high school participated in this study. Seventy-seven participants were from a middle-class background. Seventy-three percent of AAs had been born in the United States, and AA students who were not born in the United States had spent an average of 14.4 years in the United States.

We created a failure experience for the students using the same study procedure from Study 3a. Students completed a set of difficult anagrams and received failure feedback. After the failure, participants completed the manipulation. They were given a prompt in which they were asked to recall an instance when their mothers asked them to do a task, and the prompt differed according to condition. In the Interdependent Pressure condition, participants were told to "Think of a time when your mother nagged you to do a task while spending a lot of time working on the task with you." In the Independent Pressure condition, participants were asked to "Think of a time when your mother nagged you to do a task" with no mention of their mothers working alongside them. The types of tasks that participants recalled included academics (e.g., their mothers teaching them how to do math or read), household chores (e.g., their mothers teaching them how to cook or clean their room), and skills (e.g., their mothers teaching them how to drive or ride a bike). The content of the tasks did not differ by condition, χ^2s(1, N = 54) < 2.50, ps > .05.

After the manipulation, participants completed a second set of difficult anagrams, and we measured their motivation by summing the number of anagrams they attempted. Because the task was difficult, we did not expect differences in performance (Hamedani et al., 2013). Participants then reported how interdependent they feel with their mothers (i.e., how connected they feel with their mothers) using the overlapping selves measure from Study 2 (A. Aron et al., 1992).

Results

As predicted, AAs in the Interdependent Pressure condition (M = 8.68, SD = 3.40) compared with those in the Independent Pressure condition (M = 6.52, SD = 2.80) attempted to solve more anagrams, $t(52) = -2.56$, $p = .01$ (see Figure 4). AAs' performance, however, did not differ by condition, $t(52) = -1.19$,

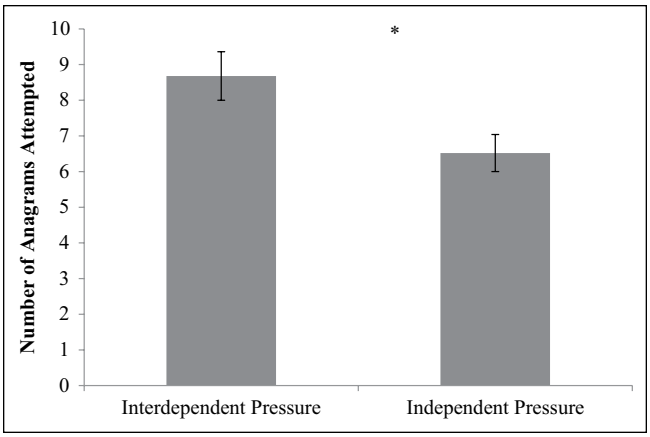

Figure 4. Motivation: Mean number of attempted anagrams by condition for Asian Americans.
*$p < .05$

$p = .24$, though the pattern of performance was similar to persistence (Interdependent Pressure: $M = 3.40$, $SD = 2.31$; Independent Pressure: $M = 2.79$, $SD = 1.37$). Notably, AAs' ratings of interdependence with their mothers did not differ by condition, $t(52) = -.71$, $p = .48$.

We then examined whether AAs' feeling of interdependence with their mothers would predict their motivation, and whether this relationship would be moderated by condition. First, we tested whether there was a correlation between persistence and feeling interdependent with their mothers. We found that overall AAs reported a positive correlation between how interdependent they feel with their mothers and how much they persisted following failure, $r(79) = .25$, $p = .02$. As predicted, however, we found that this relationship was specific to the Interdependent Pressure condition. Only in this condition did interdependence with their mothers significantly predict persistence, $r(23) = .41$, $p = .04$. In the Independent Pressure condition, this relationship was not significant, $r(27) = -.04$, $p = .84$.

Next, we conducted a regression analysis to test whether the relationship between feeling interdependent with their mothers and feeling motivated by their mothers' pressure was moderated by condition. Specifically, we used a linear regression to test the interaction between condition and feeling interdependent with their mothers (mean-centered) on persistence (mean-centered). The interaction was in the expected direction, $b = -.83$, $SE_b = .53$, $\beta = -.41$, $p = .12$, but it was not significant. Simple slopes analyses revealed, however, that participants who reported experiencing high interdependence with their mothers (+1*SD* above the mean) persisted more when they recalled an instance of interdependent pressure from their mothers than when they recalled an instance of independent pressure, $t(50) = -2.84$, $p = .006$. Participants who reported experiencing low interdependence with their mothers (–1*SD* below the mean) showed no difference in persistence by condition, $t(50) = -.61$, $p = .55$.

Discussion

Pressure by mothers can motivate AAs particularly when that pressure signals interdependence with their mothers, as in the instance when Tiger Mother pressured Lulu to practice the piano and also worked alongside her, fully involved in her practice. Moreover, these results suggest that AAs who feel interdependent with their mothers are likely to be the ones who benefit most from their mother's pressure when that pressure conveys interdependence.

This study illuminates one reason why pressure may be motivating in AA contexts—pressure in AA contexts takes an interdependent form. AA mothers may not only push their children to master the task at hand, but they are also likely to join efforts with their children and apply pressure in a way that underscores the connection between them and their children. Pressure by mothers can thus be experienced as a sign of interdependence and help AAs maintain persistence in the face of failure.

General Discussion

The results of these studies can calm the clash over the role of parental involvement in academic achievement. They show that Chua and her critics can both be right. As hypothesized, we found that mothers are more motivating for AA students than they are for EA students. Across four studies using a variety of measures, we provide evidence for one explanation for this difference. AAs see themselves as interdependent with their mothers, and therefore, they are able to draw on their mother's pressure—their mother's "annoying voice," in the words of Tiger Cub, Lulu Chua—to maintain their motivation on a difficult task. Specifically, AAs describe their mothers in terms of their mother's relationship with them, report feeling connected with their mothers, and experience pressure by their mothers as unrelated to support by their mothers. Thus, at the point of failure, when they are made to think of their mothers, they continue to persist. In contrast, EAs see themselves as independent from their mothers, and so when they think about their mothers after a difficult task, they are less motivated. Specifically, they describe their mothers in terms of their individual attributes, report themselves as relatively separate from their mothers, and experience a negative relationship between pressure and support by their mothers. Following failure, they thus persist less than AAs after thinking about their mothers.

These findings are consistent with past research on responses to failure. Japanese college students, reflecting motives for self-improvement, persist more after failure on a task; Americans, in contrast, reflecting motives for self-enhancement, persist more after success (Heine et al., 2001). Our studies provide a complementary explanation for the greater persistence by AAs after failure. Self-improvement is highly valued in East Asian contexts, and so mothers,

reflecting the interdependent tendencies in these contexts, may put pressure on their children with directions for how to improve in addition to exhortations to keep working. In fact, East Asian mothers more so than American mothers draw attention to the mistakes their children made with the goal of helping their children improve (P. J. Miller, Sandel, Liang, & Fung, 2001; Ng et al., 2007). Thus, the greater persistence that East Asians show after failure may be a motivational consequence of habitually invoking self-improvement goals that others with whom they are interdependent emphasized to them.

During a difficult task, most students will reach a point when they want to give up. From a EA perspective that theorizes motivation as an intrinsic force, some individual factor must be called upon to maintain motivation. Persistence then depends on replenishing one's ego, amping up self-control, or drawing on grit (e.g., Baumeister, Vohs, & Tice, 2007; Duckworth, Peterson, Matthews, & Kelly, 2007; Tice, Baumeister, Shmueli, & Muraven, 2007). The studies presented here point to an alternative system of motivation that may be prevalent in interdependent contexts. Instead of looking to individual factors to fuel motivation, AAs may instead look to the close others with whom they are connected to maintain their motivation. Because of their interdependent relationships, AAs may not experience pressure by their close others, such as their mothers, as undermining their independent self as EAs do. Instead they construe this pressure as bolstering their interdependent self and can invoke this pressure to focus on the task. In fact, our studies indicate that not only do AAs maintain their motivation, but they could experience better performance after thinking about their mothers and her pressure. Thus, unlike in EA contexts where overcoming failure is a personal project, in East Asian contexts, overcoming failure is a team effort.

The suggestion that motivation is experienced more as a team effort in AA contexts and more of a personal project in EA ones has implications for cultural variation in other situations that require motivation. First, AAs more so than EAs should be motivated by their mothers not only following failure but also following success. Indeed, even when their children succeed, East Asian mothers direct them toward ways to improve (Ng et al., 2007). In contrast, EAs are likely to construe success as an individual achievement that highlights personal strengths (Heine et al., 2001), and so they may experience the inclusion of their mothers as an encroachment on their achievement, which may inhibit motivation. Second, AAs should also be motivated by their mothers in other domains than academic ones that are valued (e.g., playing musical instruments), but not in those domains that may be devalued or deemed irrelevant to becoming an educated and mature person (e.g., playing sports). Third, in addition to their mothers, AAs may be similarly motivated by a range of others including fathers and peers to the extent that they experience an interdependent relationship with them.

The focus of this article was on explaining how pressure by mothers can motivate AAs. The results, however, pose a set of intriguing questions about when and how mothers can be motivating for EAs. Though we find that EA high school students are less motivated by thoughts of their mothers on an academic task at school, there are surely instances in which they will be motivated by their mothers. For example, Fitzsimons and Bargh (2003) found that students associate their mothers with achievement goals, and Shah (2003) showed that students who are reminded of their mother's achievement goals for them experience motivation. These results together with the current findings suggest that while EA mothers could be motivating, their influence should not threaten the student's culturally prescribed independence. In fact, consistent with this idea, a recent study found that EAs adults who are induced to think of themselves in an interdependent rather than in an independent way experience impaired motivation (Hamedani et al., 2013). Thus, appeals to motivate EAs by invoking close others, like mothers, must be sure to protect the individual's sense of independence.

Our studies shed light on the passion fueling the Tiger Mother controversy. At stake in the clash are differences in tacit but powerful cultural models about the sources of behavior. These models direct attention to the individual in EA contexts and to the relationship in AA contexts. In both contexts, parents support their children and want them to succeed. EA mothers who assume that achievement is an individual project may be right to believe that too much maternal involvement can quash motivation. Tiger Mothers who assume that achievement is a group project may be equally right to assert that parental involvement is beneficial for motivation. These findings underscore the importance of understanding cultural variation in how people construe themselves and their relationships to others. While EA parents give their children wings to fly on their own, AA parents provide a constant "wind beneath their children's wings."

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Notes

1. Some also accused Tiger Mom of representing Asian parenting as extreme and guilty of stereotyping. While these claims are not the focus of this article, much research has been done to examine how parenting styles in East Asian contexts are more nuanced than the one that Tiger Mom provides (Chao, 1994; Y. Choi, Y. S. Kim, S. Y. Kim, & Park, 2013; S. Y. Kim, Wang, Orozco-Lapray, Shen, & Murtuza, 2013; Way et al., 2013).
2. We use the term *Asian American* (AA) to refer to those who are of East Asian descent (e.g., who identify as Chinese, Japanese, Korean, etc.).
3. Direct questionnaire measures of independence and interdependence often fail to reveal expected cultural differences (e.g., Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009).
4. Generation did not moderate any of the effects reported in this article except for one notable difference in Study 2. AAs born in the United States compared with those not born in the United States reported experiencing greater pressure by their mothers (U.S.-born: $M = 5.55$, $SD = 1.18$; non-U.S.-born: $M = 4.45$, $SD = 1.62$), $t(30) = 2.16$, $p = .04$. U.S.-born AAs, however, also reported experiencing greater support by their mothers (U.S.-born: $M = 6.10$, $SD = .82$; non-U.S.-born: $M = 5.20$, $SD = .79$), $t(30) = 2.87$, $p = .007$.
5. Notably, additional analyses revealed that AAs' overall level of achievement orientation did not differ by condition or predict their persistence. Students reported their achievement orientation on two items adapted from the Personal Standards subscale (Frost, Marten, Lahart, & Rosenblate, 1990), *If I do not set the highest standards for myself, I am likely to end up a second-rate person*, and *I am very good at focusing my efforts on attaining a goal*, rated from 1 (*strongly agree*) to 7 (*strongly disagree*). AAs did not differ in their agreement by condition with either the first item (overall $M = 4.93$, overall $SD = 1.73$) or the second item (overall $M = 4.36$, overall $SD = 1.85$), $ts < -1.50$, $ps > .05$. Furthermore, neither of the items predicted AAs' persistence in either condition, $.05 < rs < .07$, $ps > .05$.

References

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*, 596-612.

Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, *16*, 351-355.

Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. Berkeley: University of California Press.

Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, *65*, 1111-1119.

Chao, R. K. (1995). Chinese and European American cultural models of the self reflected in mothers' childrearing beliefs. *Ethos*, *23*, 328-354.

Chao, R., & Tseng, V. (2002). Parenting of Asians. In M. H. Bornstein (Ed.), *Handbook of parenting* (Vol. 4, pp. 59-93). Mahwah, NJ: Lawrence Erlbaum.

Chen, C., & Stevenson, H. W. (1995). Motivation and mathematics achievement: A comparative study of Asian-American, Caucasian-American, and East Asian high school students. *Child Development*, *66*, 1215-1234.

Choi, Y., Kim, Y. S., Kim, S. Y., & Park, I. J. K. (2013). Is Asian American parenting controlling and harsh? Empirical testing of relationships between Korean American and Western parenting measures. *Asian American Journal of Psychology*, *4*, 19-29.

Chua, A. (2011a). *Battle hymn of the Tiger Mother*. New York, NY: Penguin Press.

Chua, A. (2011b, January 8). Why Chinese mothers are superior. *Wall Street Journal*. Available from http://online.wsj.com/

Deal, G. (2011, January 14). Chinese parenting: Thanks, I'll pass. *Wall Street Journal*. Available from http://blogs.wsj.com

Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development*, *58*, 1244-1257.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*, 1087-1101.

Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: Nonconscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, *84*, 148-164.

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, *14*, 449-468.

Fryberg, S. A., & Markus, H. R. (2007). Cultural models of education in American Indian, Asian American and European American contexts. *Social Psychology of Education*, *10*, 213-246.

Hamedani, M. G., Markus, H. R., & Fu, A. S. (2013). In the land of the free, interdependent action undermines motivation. *Psychological Science*, *24*, 189-196.

Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in Japan and North America: An investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, *81*, 599-615.

Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, *76*, 349-366.

Kim, S. Y., Wang, Y., Orozco-Lapray, D., Shen, Y., & Murtuza, M. (2013). Does "tiger parenting" exist? Parenting profiles of Chinese Americans and adolescent developmental outcomes. *Asian American Journal of Psychology*, *4*, 7-18.

Kitayama, S., Duffy, S., & Uchida, Y. (2007). *Self as cultural mode of being*. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 136-174). New York, NY: Guilford Press.

Kitayama, S., Park, H., Sevincer, A. T., Karasawa, M., & Uskul, A. K. (2009). A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology*, *97*, 236-255.

Li, J. (2012). *Cultural foundations of learning: East and West*. New York, NY: Cambridge University Press.

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

Markus, H. R., & Kitayama, S. (2003). Models of agency: Sociocultural diversity in the construction of action. In V. Murphy-Berman

& J. J. Berman (Eds.), *Cross-cultural differences in perspectives on the self* (Vol. 49 of the Nebraska Symposium on Motivation, pp. 1-58). Lincoln: University of Nebraska Press.

Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science*, *5*, 420-430.

Miller, J. G., & Bersoff, D. M. (1994). Cultural influences on the moral status of reciprocity and the discounting of endogenous motivation. *Personality and Social Psychology Bulletin*, *20*, 592-602.

Miller, P. J., Sandel, T. L., Liang, C. H., & Fung, H. (2001). Narrating transgressions in Longwood: The discourses, meanings, and paradoxes of an American socializing practice. *Ethos*, *29*, 159-186.

Ng, F. F.-Y., Pomerantz, E. M., & Lam, S. F. (2007). European American and Chinese parents' responses to children's success and failure: Implications for children's responses. *Developmental Psychology*, *43*, 1239-1255.

Plaut, V. C., & Markus, H. R. (2005). The "inside" story: A cultural-historical analysis of being smart and motivated, American style. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 457-488). New York, NY: Guilford.

Savani, K., Morris, M. W., & Naidu, N. V. R. (2012). Deference in Indians' decision making: Introjected goals or injunctive norms? *Journal of Personality and Social Psychology*, *102*, 685-699.

Shah, J. (2003). The motivational looking glass: How significant others implicitly affect goal appraisals. *Journal of Personality and Social Psychology*, *85*, 424-439.

Tice, D. M., Baumeister, R. F., Shmueli, D., & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology*, *43*, 379-384.

Wall Street Journal Blogs. (2011, January 13). The Tiger Mother responds to readers. *Review: Ideas Market*. Available from http://blogs.wsj.com

Wang, Q. [Qi]. (2001). Cultural effects on adults' earliest childhood recollection and self-description: Implications for the relation between memory and the self. *Journal of Personality and Social Psychology*, *81*, 220-233.

Wang, Q. [Qi]. (2006). Relations of maternal style and child self-concept to autobiographical memories in Chinese, Chinese immigrant, and European American 3-year-olds. *Child Development*, *77*, 1794-1809.

Wang, Q. [Qian], & Pomerantz, E. M. (2009). The motivational landscape of early adolescence in the United States and China: A longitudinal investigation. *Child Development*, *80*, 1272-1287.

Way, N., Okazaki, S., Zhao, J., Kim, J. J., Chen, X., Yoshikawa, H., . . .Deng, H. (2013). Social and emotional parenting: Mothering in a changing Chinese society. *Asian American Journal of Psychology*, *4*, 61-70.