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Chinese and Canadian Identity on Responses to the Experience of Shame and Guilt

Chang Su[1] (ORCID) · Michaela Hynie[2]

Abstract
Negative self-conscious emotions (shame, guilt) may be a universal mechanism to support self-regulation to conform to social norms, which may be seen as part of the identity development process. They may work differently as a function of cultural differences in self-construal. The effect of cultural background on the self-regulation of shame and guilt was addressed in four groups of undergraduate students: European Canadian (EC, N = 99), Chinese Canadian (CC, N = 86), international Chinese students in Canada (IC, N = 65) and mainland Chinese (MC, N = 69). Participants read 18 scenarios describing norm violations, and rated each scenario on a 12-item Shame and Guilt Self-Regulation Scale (SGSRS). MANOVAs showed that MCs endorsed a more positive approach (i.e., problem focus coping, support seeking) to the guilt and shame scenarios than CC and EC. Gender differences also emerged; women endorsed more positive approach strategies to shame than men and less withdrawal (denial). Culture affects responses to both shame and guilt, but do not extend to first generation CCs who have lived in North America. Cultural norms interact with self-conscious emotions affect the development of some aspects of identity.

Keywords self-conscious emotions · shame · guilt · identity · cross-cultural psychology

✉ Chang Su
   sus@brandonu.ca

   Michaela Hynie
   mhynie@yorku.ca

[1]   Department of Psychology, Faculty of Science, Brandon University, 270 18th St, Manitoba, Brandon R7A 6A9, Canada

[2]   Department of Psychology, Faculty of Health, York University, 4700 Keele Street, Toronto, Ontario M3J 1P3, Canada

Identity and Experience of Shame and Guilt

During the transition to adulthood, young people develop a sense of personal identity (Cooper 2014). Identity in psychology refers to qualities, beliefs, personality, and looks/expressions, traits and characteristics, social relations, roles, and social group memberships (McLeod 2019). Several aspects of identity development are influenced by cultural values, goals, and beliefs as the developing child and adolescent self-regulates to conform to, and internalize, cultural norms (Sugimura et al. 2016). It has been argued that one of the ways that cultural values and norms become internalized is through the experience of self-conscious emotions (Chung and Robins 2015).

Self-conscious emotions are powerful emotions that involve perceiving the self as the object of judgement (Adolphs and Andler 2018). Self-conscious emotions include the negative emotions of shame, guilt, and embarrassment and the positive emotion of pride. The most powerful of these emotions are shame and guilt (Chung and Robins 2015). Negative self-conscious emotions often arise following violations of social norms. Although painful, these emotions are functional because they may play a central role in moral development; they can lead to introspection after making a mistake, and motivate behavior to repair norm violations, mend damaged relationships, and adapt to the moral standards of society (Crowder and Kemmelmeier 2017).

Lewis (1971) stated that the difference between shame and guilt centers on the engagement of the self. Guilt is a negative assessment of behavior and does not affect one's core identity, the self remains basically intact. Guilt is associated with feeling remorse or regret about specific wrongful actions, and empathetic concern for those harmed. As a result, it is typically associated with the desire to take action to repair the harm. In contrast, shame arises from a negative focus on the self, on one's core identity (Lickel et al. 2014). It involves a negative self-judgment, with feelings of helplessness, worthlessness, anxiety, and anger, and, at least in North America, is linked to hiding and escaping to protect the damaged self (Pinto-Gouveia and Matos 2011). Research on self-conscious emotions has identified guilt as a prosocial emotion, since it leads to relationship reparation. Shame, however, has been identified as an anti-social emotion, since it leads to withdrawal and anger (Freis et al. 2015). Those who study shame and guilt in North America therefore encourage avoiding shame, and shame-inducing situations (Poless et al. 2016). However, recent research suggests that shame can also lead to proactive, prosocial behavior when it is linked to a motivation to improve the self (Torstveit et al. 2016).

Cultural Differences on Responses to Guilt and Shame

Although shame and guilt are universal emotions (Tangney et al. 2011), empirical research suggests that there may be cultural differences in how shame and guilt are experienced. For example, shame is highly elaborated and organized in China (Zhuang and Bresnahan 2016). As a result, there may be types of guilt and shame that are unique to Chinese culture (Zhuang and Bresnahan 2016). Chinese culture is based on Confucianism, which emphasizes concepts of personal duty, social goals, and filial piety (Bedford and Yeh 2019). The Chinese adopt a different view and practice regarding shame than European-origin North Americans. For the Chinese, shame is an essential social and moral emotion and a virtue. As a result, it is a prominent technique of social control and child rearing (Yao 2017).

Because shame and guilt are emotions that focus on the self, they are likely to be affected by cultural differences in self-construals. Individualistic countries such as Canada and the United States emphasize independent concepts of the self. People reared in cultures with highly individualistic values tend to develop a view of self as an independent agent, and view themselves in terms of their independence, autonomy, solitude, and self-reliance. For people with an independent self-concept, behavior is likely to reflect personal goals (e.g., I need to get good grade because I want to go to medical school) (Triandis 2018). In contrast, collectivistic countries such as China, India, and Japan promote interdependent concepts of self, view themselves in terms of their connections with others, and cannot separate themselves from their social contexts (e.g., good grades will bring honor to my family) (Triandis 2018). Thus, other people's thoughts and feelings are as important and meaningful in Eastern countries.

Western research has found that reactions to the experience of shame and guilt differ in terms of the motivations they evoke and their appraisals (Miceli and Castelfranchi 2018). North American research suggests that people experiencing guilt usually rectify the problem, and engage in more approach related behaviors designed to confess, apologize, and repair the situation and relationship (Miceli and Castelfranchi 2018). In contrast, people experiencing shame have an intense emotional response and a fear that they will be rejected by others. The feeling of shame results in a disruption of social contacts, linked to a desire to insulate oneself from negative evaluation, and distance oneself from the social situation and interpersonal relationships (Miceli and Castelfranchi 2018). However, research with US students has found that those with a more independent sense of self, either as a trait or because of situational priming, were more likely to attribute shame-inducing situations to external factors, rather than taking responsibility for them (Dean and Fles 2016). These findings suggest that cultural differences will emerge in settings that differ in terms of individualism and collectivism.

Indeed, a small number of studies have compared collectivist and individualist cultures in their responses to shame and guilt and found parallel results. Bagozzi et al. (2003) found that sales people in the collectivist culture of the Philippines responded to shame in ways that emphasized their connectedness to others and strengthened existing relationships to maintain and enhance the interdependent view of the self. Following a shame experience, those with interdependent self-construals sought to repair the self by reconnecting with the collective. Salespeople in the Netherlands, with independent self-construals, sought seek to repair the self following a shame experience by retreating into isolation. Work comparing children from the independent culture of the US with those from the collectivist cultures of Japan and South Korea tended not to support these differences (Furukawa et al. 2012) but some have argued that Japan is becoming more individualist (Hamamura 2012; Ogihara et al. 2015) and so may not be a good test of how cultural differences in self-construal affect responses to self-conscious emotions.

There is little research on Chinese responses to shame and guilt. However, Qian et al. (2003) studied how Chinese college students reported that they would cope in different shame situations, and found both active strategies, such as "confronting the problem directly" and passive approaches such as "waiting for feeling to change." Nonetheless, they were not inclined to use the methods of "denial and withdrawal," responses which seem to be common among North Americans.

One study comparing the cultural differences between mainland Chinese and European Canadians in their descriptions of personal experiences of shame and guilt found that both groups focused more on repairing actions in guilt than shame scenarios but European Canadian's shame scenarios included more withdrawal than mainland Chinese scenarios,

and their guilt scenarios included more repairing actions than mainland Chinese scenarios (Su and Hynie 2010). Thus, we predict that, relative to people who are culturally European, culturally Chinese adults would respond to shame in ways that are more in line with notions of "self-repair" than the self-protective response of withdrawal.

Gender Differences on the Responses of Shame and Guilt

Emotional intelligence, the sharing of emotions, emotional responsivity, and benefiting relationally from sharing emotions been found to be higher among women than men (Fischer et al. 2018). This gender difference in emotionality may be related to differences in expectations, attitudes, and responses to expressions of autonomy and relatedness; across cultures, women are often socialized in ways to increase dependence and compliance, while autonomy is nourished more in men in their lifespan (Koenig 2018).

These gender differences in emotionality have also been found for the emotions of shame and guilt. Velotti et al. (2016) found that women registered significantly higher shame and guilt scores than men. Interestingly, Benetti-McQuoid and Bursik (2005) studied individual differences in guilt and shame responses in 104 young adults, most of whom were European American. The results indicated that women reported greater proneness to guilt and shame, while men reported more trait guilt. Since women's emotional responsiveness is believed to be tied to a more interrelated self-concept, it may interact with cultural differences in self-concepts and cultural responses to shame and guilt. Gender was therefore also examined in this study in an exploratory way.

The Purpose of This Study

This study addressed responses of undergraduate students in mainland China and Canada to shame and guilt eliciting situations. In order to explore directly the role that acculturation and local norms, we compared young adults of Chinese origin in China with Chinese immigrants and Chinese international students living in Canada. Chinese immigrants and international Chinese might share family experiences with their Chinese peers, but they share their immediate environment and local norms with their Euro-Canadian peers. No previous studies have explicitly compared the experience of shame and guilt in these four groups.

We predicted that all participants would respond to guilt in a similar fashion. However, based on past research, we predicted that young adults of Chinese origin, when feeling shame, will try to approach the group to maintain relationships, in effect, repairing the self. In contrast, European Canadians would adopt protective actions that distanced themselves from others and involved withdrawal. Chinese international students should resemble their Chinese peers. Chinese Canadian students who have been raised in Canada, however, have been affected by both their parents' heritage culture's response to shame and the norms of majority Canadian. It is therefore unclear whether they would resemble Mainland Chinese students, or their non-immigrant European Canadian peers.

Thus, the following two hypotheses were tested:

Hypothesis 1: There will be a main effect of culture on responses to shame.

It was hypothesized that Chinese young adults would self-regulate their guilt similarly to Europeans. Participants from all cultural groups would prefer approach over withdrawal in experiencing guilt. However, because of the implications of shame for the self-concept, and cultural differences in the self-concept, responses to shame would differ. Young adults of Chinese origin would adopt actions to approach to maintain relationships when experiencing shame. In contrast, young adults with a European background would adopt protective actions that distance themselves from others and withdraw. Canadian Chinese and international Chinese students were hypothesized to fall between these two groups.

Hypothesis 2: There will be a main effect of gender on responses to shame and guilt.

Because previous studies showed that boys experienced less shame than girls (Chaplin and Aldao 2013) and women express shame more openly than men (Velotti et al. 2016), it was predicted that women in all groups would endorse more approach actions than men in shame and guilt situations, in order to maintain better relationships with others.

Method

Participants

The sample included 69 undergraduate Chinese students in China (MC, $M = 21.41$), 86 Chinese Canadians students (CC, $M = 20.42$), 99 students of European Canadian descent (EC, $M = 19.53$), and 65 international Chinese students in Canada (IC, $M = 23.96$).

Sixty out of 99 ECs were recruited using an undergraduate research participant pool (URPP) and answered on-line. The remaining 39 ECs answered on paper (including 16 ECs from business classes, 15 ECs from psychology classes, and 8 ECs were recruited in person on campus). All of the ECs were either born in Canada or moved to Canada with their parents from European countries prior to the age of 8 years, and were of European descent. MCs were recruited from Education classes at one University ($N = 69$) by the class instructor. All were born in northeast China. Eighty-six CCs were either recruited on the campus of a Canadian university ($N = 63$) or through the social network of the experimenter ($N = 23$). Their parents had to be from mainland China and now living in Canada and they themselves had to have been born in Canada or have moved to Canada before the age of eight. Sixty-five ICs were recruited from the Chinese literature class in York university through a class announcement ($N = 55$) or by snowball sampling ($N = 10$). They were born in mainland China and started to study in Canada when they were over 18 years of age.

Procedure

The procedure was approved by the University Human Participants Review Committee. All of the Chinese participants in mainland China and international students received the materials in Mandarin. Materials were translated into Mandarin and then back translated into English by two bilingual Chinese-English speakers, and then were reviewed by the female experimenter. CC and EC students were given all the materials in English. Participants were asked to read and sign the consent form.

The questionnaires included a demographics form and 18 scenarios in which examples of shame and guilt generated by 35 Chinese men and women were used to create possible scenarios. Ten Canadian Chinese rated how well each exemplar scenario matched each of the nine Mandarin categories of shame and guilt developed from Chinese terms for guilt and shame (see Appendix A), two each from the four categories of guilt ($N = 8$) and the five categories of shame ($N = 10$) (Su and Hynie 2010). Each scenario was accompanied by the Self-Regulation of Shame and Guilt Scale (SRSGS, see Appendix A and Materials section for a description). Participants either mailed the survey back to the experimenter, dropped it off at the experimenter's university office, or participants met with the experimenter in person to return it. All students were given a thank you Letter and a debriefing letter and either $5 or the equivalent in Chinese Yuan. Canadian students or Chinese or European descent were recruited from the undergraduate participant pool to complete the surveys on-line. Participants were asked to read a consent form and type "I agree" on the consent form before proceeding to complete the materials in English. Once completed, participants pressed the "submit" button and then received a written debriefing a thank you letter and course research credits.

Measures

(1) Demographic information. Students were asked their year of birth, gender, year of study, university major, religion, the country of residence of their parents, and where they themselves were born. CCs and ICs were also asked about the number of years they had been living in Canada and the year they came to Canada.

(2) Self-regulation of Shame and Guilt Scale (SRSGS). Because no scale existed to reflect both Chinese and North American self-regulation strategies, the authors modified previously existing scales to create a new measure of shame and guilt self-regulation (Self-Regulation of Shame and Guilt Scale, SRSGS). We identified and developed 23 items measuring responses to shame and guilt from the initial 17 items in a study with Chinese participants by Qian et al. (2003). The original scale had a Cronbach's $\alpha = .94$. We altered the scale by separating compound items into their individual components, and combining redundant items into single items. We then supplemented these items with seven additional items from the Test of Self-Conscious Affect (TOSCA; Tangney et al., 1996) a scale widely used to measure feelings of shame and guilt (original Cronbach's $\alpha = .91$). The final scale had 30 items.

Two raters coded the 30 items and identified nine main categories of responses. There were (A) approach (ideas or actions intended to deal with a problem or situation); (B) avoidance (keeping away from or preventing from happening); (C) counterfactual thinking (thinking of something that is contrary to the facts, how the past might have turned out differently to have achieved a better outcome); (D) facing reality (confronting the current problem and being realistic); (E) self-soothing (calming and relaxing the body and the mind); (F) seeking social support (asking for help in various ways); (G) prayer (hoping it would happen as the person wished); (H) regret (a feeling of disappointment or distress about something that one wishes could be different); and (I) other coping strategies.

A pilot study conducted with two Chinese and four European Canadians was then used to confirm the main themes in this set of items. Participants were provided with the above nine

categories for responses to shame and guilt, and were asked to sort the 30 items into these nine categories. We chose to accept an item if more than four people (66.7%) agreed on what it represented[1].

Categories A (approach), B (avoidance), E (self-soothing), and F (seeking support) were well represented, whereas categories C (counterfactual thinking), D (facing reality), G (prayer), and H (regret) were not. We therefore combined categories A (approach) and D (facing reality) into approach, and categories C (counterfactual thinking) and H (regret) into counterfactual thinking. We omitted G, the prayer category, since only 1 item loaded clearly on it. The final scale had 12 items representing 5 categories.

Participants were presented with two examples of each of the four types of guilt and five types of shame (for a total of two times nine, or 18 scenarios) and rated how they would respond to each scenario using the 12 items of the SRSGS. Each item was accompanied by a 7-point scale (-3 = never use this strategy, 0 = not sure, $+3$ = definitely use this strategy). Participants were asked to rate each item using this scale.

Data Analysis

All variables were centered prior to analyses to reduce multicollinearity. Missing values were replaced by the item mean of the whole sample. We took the mean of the two scenarios for each type of guilt and shame situation resulting in four means for responses in guilt scenarios (one for each type) and five means for responses to shame scenarios (again, one for each type). The means of the guilt items were then averaged to create a mean guilt response, and the means of the shame items were averaged to create a mean shame response.

Factor analysis using principle axis factoring (Winter and Dodou 2012) was conducted separately for each of the four cultural groups (MC, CC, IC, and EC) on mean responses to the 12 SRSGS items across all the shame/guilt scenarios. As the factors were expected to be moderately correlated, direct oblique rotation (Finch 2006) was performed. To determine the

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[1] For responses to guilt scenarios, the scree plot indicated four factors, which were rotated using a direct oblimin rotation procedure. Items loading at least .40 on each factor were retained. Items loading at .40 and higher on the first factor, "problem focused coping,", contained the items "Confront the problem directly,", "Find a good method to solve the problem," and "Apologize for my bad behavior." The factor "problem focused coping" accounted for 30.92% of the item variance. The second factor "denial and avoidance" yielded two items "Not think about the event" (item 4: denial) and "Keep my distance from the people who had seen what I had done" (item 5: avoidance), which accounted for 15.49 % of the item variance. The third factor "counterfactual thinking" had three items, which were "Imagine a different outcome of this event,", "Tell myself never do this again,", and "Wish that I had never done it or done it in another way.". This variable accounted for 9.81 % of the item variance. The fourth factor, "support seeking" was comprised of two items "Tell this story to someone else to get some advice" and "Tell others about my unhappy feelings,", which accounted for 5.83 % of the item variance.

For responses to shame scenarios, the scree plot indicated five factors that explained 64.38 % of the variance. The first factor contained two items "Imagine a different outcome of this event" and "Wish that I had never done it or done it in another way.". This is clearly "counterfactual thinking." The "counterfactual thinking" factor accounted for 31.88% of the item variance. The second factor contained the items "Confront the problem directly,", "Find a good method to solve the problem," and "Apologize for my bad behaviour." This is clearly "problem focused coping." The "problem focus coping" factor accounted for 10.96 % of the item variance. The third factor contained two items "Tell this story to someone else to get some advice" and "Tell others about my unhappy feelings." This was labeled "support seeking." The "support seeking" factor accounted for 9.05% of the item variance. The fourth factor contained one item "Not think about the event." This was labeled "denial" and accounted for 7.22 % of the item variance. The fifth factor contained one item "Keep my distance from the people who had seen what I had done." This is clearly "avoidance." The "avoidance" factor accounted for 5.27 % of the item variance.

number of factors in the final solution, two criteria were considered: Catell's scree test (Taherdoost et al. 2014) and theoretical interpretability.

The factor loadings are presented for each cultural group in Appendix B. Although the factor analyses were not identical for each group, subsets of similar items clustered together for each group across both types of emotion. We therefore combined the four samples for factor analyses. The factor loadings obtained were sufficiently similar across the types of self-conscious emotions to permit the use of five identical factors in both shame and guilt by splitting the second factor of guilt "denial and avoidance" into two factors, namely "denial" and "avoidance." Therefore, five types of responses were obtained through the factor analysis: problem-focused coping (PF); counterfactual thinking (CT); support seeking (SS); denial (DN); and avoidance of others (AV). The alpha of this scale on all guilt items for MC was .67, for IC was .74, for EC was .66, for CC was .66. The alpha of this scale on all shame items for MC was .69, for IC was .76, for EC was .80, and for CC was .83 (Appendix C).

Results

Effects of Culture on Responses to Guilt Scenarios

According to our first and second hypothesis, responses to shame among the four groups should differ from each other, but responses to guilt should be similar. We performed a two-way (4: cultural groups by 2: gender) multivariate analyses of variance (MANOVA) to look at mean differences for the five types of responses to guilt scenarios (problem-focused coping, avoidance, counterfactual thinking, denial, and support seeking) (Tables 1 and 2). We then ran a second 4 by 2 MANOVA to look at the effects of culture and gender on the five types of responses to shame scenarios.

The results of the overall main effect of cultural group on the responses to guilt showed a significant effect of culture across the five types of responses to guilt scenarios, $F(15, 847) = 2.77$, $p < .01$, $\eta^2 = .04$. The main effect of gender was also significant, $F(5, 307) = 6.27$, $p < .01$, $\eta^2 = .09$, Wilks' Lambda = 0.907. We therefore looked at the univariate ANOVAs for each type of response.

The univariate ANOVA for problem focused coping in guilt scenarios was significant, $F(3, 313) = 6.08$, $p < .01$, $\eta^2 = .06$. Post hoc analyses showed that MCs and ICs did not differ from each other, but MCs reported higher problem focused coping than ECs and CCs. ICs reported higher problem focused coping than ECs. Culture also affected support seeking in guilt situations, $F(3, 312) = 6.43$, $p < .01$, $\eta^2 = .06$, such that ICs, CCs, and ECs did not differ from each other, but MCs reported higher support seeking than all others. The effect of culture on denial in guilt situations was significant, $F(3, 313) = 2.76$, $p < .05$, $\eta^2 = .03$. MCs and ICs differed marginally from each other, but MCs tended to report lower denial than ECs ($M = -.86$) and CCs ($M = -.84$).

The effect of culture on avoidance in guilt scenarios was marginally significant, $F(3, 313) = 2.19$, $p = .09$, $\eta^2 = .02$. MCs and ICs did not differ from each other, but mainland Chinese tended to report lower avoidance than ECs and CCs.

The Effects of Gender on Responses to Guilt Scenarios

The effect of gender on guilt counterfactual thinking was significant, $F(1, 312) = 24.82$, $p < .01$, $\eta^2 = .07$. Women reported more counterfactual thinking than men. The effect of gender on support seeking was marginally significant, $F(1, 312) = 3.60$ $p = .06$, $\eta^2 = .01$. Women tended to report more support seeking than men.

Table 1 Means and standard deviations of self-regulation to guilt scenarios by culture

		Mainland Chinese	International Chinese	Chinese Canadians	European Canadians
Problem-focused	*M*	1.76[ab]	1.50[c]	1.38[a]	1.12[bc]
coping	*SD*	.88	.97	.87	1.09
Support seeking	*M*	.67[abc]	.17[c]	−.14[a]	−.16[b]
	SD	1.38	1.41	1.33	1.29
Denial	*M*	− 1.32[abc]	−.99[a]	−.84[b]	−.89[c]
	SD	1.20	.95	1.14	1.18
Avoidance	*M*	− 1.03[ab]	−.89	−.59[b]	−.65[a]
	SD	1.34	1.11	1.13	1.22
Counter-factual	*M*	1.14	1.06	1.25	.97
thinking	*SD*	1.05	.84	.88	.98

Note: means with the same superscript are significantly different at the .05 level

Effects of Culture on Responses to Shame Scenarios

The MANOVA for shame scenario responses showed significant differences between the four groups on the five types of responses to shame scenarios, $F (15, 839) = 3.60, p < .01, \eta^2 = .06$, Wilks' Lambda = 0.842. The multivariate test of overall differences between gender was significant, $F (5, 304) = 7.04$, Wilks' Lambda 0.898. $p < .01, \eta^2 = .10$, and significant differences were also found for the interaction of cultural group and gender, $F (15, 839) = 2.18, p < .006, \eta^2 = .03$, Wilks' Lambda = 0.900.

Analyses of variance (ANOVA) on each type of response showed that there was a significant effect of culture on shame problem focused coping, $F (3, 308) = 12.56, p < .01, \eta^2 = .11$. CCs and ECs did not differ from each other, but MCs reported higher problem focused coping than CCs, ICs, and ECs. ICs reported more problem focused coping than CCs and ECs. The effect of culture on support seeking in shame scenarios was significant, $F (3, 309) = 7.23, p < .01, \eta^2 = .07$. CCs and ECs did not differ from each other. MCs reported higher support seeking than CCs and ECs and marginally more than ICs. ICs reported higher support seeking than CCs and ECs, who did not differ. The effect of culture on counterfactual thinking in shame situations was significant, $F (3, 309) = 3.62, p < .05, \eta^2 = .03$. CCs, ECs, and ICs did not differ from each other. MCs reported significantly more counterfactual thinking than CCs and ECs, but did not differed from ICs.

Table 2 Means and standard deviations of self-regulation to shame scenarios by culture

		Mainland Chinese	International Chinese	Chinese Canadians	European Canadians
Problem-focused	*M*	1.43[abc]	1.12[cd]	.76[ad]	.70[bd]
coping	*SD*	.77	.97	.74	1.01
Support seeking	*M*	1.00[abc]	.57[c]	.20[a]	.20[b]
	SD	1.40	1.36	1.38	1.40
Denial	*M*	−.45	−.23	−.09	−.51
	SD	1.53	1.21	1.20	1.14
Avoidance	*M*	−.56	−.57	−.25	−.52
	SD	1.30	1.24	1.15	.13
Counter-factual	*M*	1.57[a]	1.35	1.19[a]	1.23[a]
thinking	*SD*	1.03	.93	.94	1.10

Note: means with the same superscript are significantly different at the .05 level

The Effect of Gender on Responses to Shame Scenarios

The effect of gender on support seeking was also significant, F (1, 309) =11.11, p < .01, η^2 = .03. Women (M = .65) reported more support seeking than men (M = .16). The effect of gender on denial was significant, F (1, 309) = 4.05, p = .04, η^2 = .01. Men (M = −.18) reported more denial than women (M = −.44). The effect of gender on avoidance was significant, F (1, 309) = 5.39, p < .021, η^2 = .02. Women (M = −.30) reported more avoidance than men (M = −.63). The effect of gender on counterfactual thinking was significant, F (1, 309) = 23.22, p < .00, η^2 = .07. Women (M = 1.53) reported more counterfactual thinking than men (M = 1.01).

The Interaction of Culture and Gender

For shame scenarios, the interaction of culture and gender on denial was significant, F (3, 309) = 3.25, p < .05, η^2 = .03. All men reported more denial in shame scenarios than did women, except in the CC group, where women and men did not differ.

The interaction of culture and gender on counterfactual thinking was marginal significant, F (3, 309) = 2.62, p = .051, η^2 = .03.

Discussion

Effects of Cultures on Responses to Guilt and Shame Scenarios

Our results showed that mainland Chinese endorsed more approach (problem focused coping and support seeking) responses to the both guilt and shame scenarios than either Chinese or European Canadians. Mainland Chinese students focused on solving the problems and rebuilding relationships with others and seeking support. International students from China tended to respond in ways that resembled those of mainland Chinese students, although the differences between international students and European Canadian students were not always significant.

Although mainland Chinese cultural norms endorse the principle of saving face and not exposing their shortcomings to others, once they violated a moral principle or social norm and were in difficult conditions, they might be more motivated to find a way to solve the problem and re-establish harmonious relationship. It maybe because see the self as more malleable and thus repairable, rather than fixed (Dweck 2012). Participants in China may have endorsed an incremental mindset, in which personality is seen as malleable, as opposed to an entity mindset, where personality is seen as immutable, and thus respond differently in situations of adversity (Dweck 2007). It also may because of the emphasis on Asian cultural identity such as the interdependent self which focuses on good connections with others (Triandis 2018).

The fact that there were few differences between international students from China and students in mainland China is not surprising, given that most of these participants arrived to Canada as adults, and most have spent only a few years in the Canadian context. Research on acculturation suggests that people who migrate as adults are less likely to acculturate and that the process of acculturation takes several years. Ying et al. (2000) found that American-born Chinese were less likely to perceive racial discrimination but were more likely to take an assimilated or bicultural position, to be monolingual English speakers, and to associate with American or mixed ethnic groups. Nonetheless, some differences did emerge. It may be that

those students who choose to study abroad are already different from those who do not, but it is also interesting to consider that despite being young adults, these youth are still developing their identities and are being shaped by their local cultural context (Kroger 2017).

The results support our hypothesis that there would be cultural differences in how participants respond to shame scenarios, and that these differences are associated with the culture in which one was raised, rather than with one's immediate environment or cultural heritage. Moreover, all cultural groups also responded differently to guilt scenarios. This demonstrates that the findings are not merely due to general response tendencies but are specific to the type of situation encountered.

In every group, approach strategies were endorsed more highly than avoidance strategies in both shame and guilt situations (Cho et al. 2011). Thus, while approach strategies may have been endorsed more highly by participants from China, there was a general preference for approach responses, regardless of the situation. It should be noted, however, that we did not actually measure the extent to which participants experienced shame and guilt and therefore cannot be certain that the effect is not due to differences in what emotion was being experienced. Thus, people in each culture all endorsed more problem focused coping and support seeking than withdrawal strategies but it could be because they felt more guilt than shame. However, given the difficulty in measuring guilt and shame emotions, and distinguishing between them, examining responses to situations associated with negative social emotions may be a better way of exploring variations in responses.

Surprisingly, the results showed that there were no differences in shame denial and shame avoidance between mainland Chinese and European Canadian students. However, mainland Chinese did tend to report lower denial and lower avoidance than Canadian students of either ethnic background, but this occurred in guilt situations rather than shame situations. The results also showed that mainland Chinese students reported higher shame counterfactual thinking than the other three groups, felt more regret about their wrongdoings in shame situations and wished that they had done it in another. This may because of the emphasis on social harmony with others as a necessary strategy to maintain good relationship with others. This is consistent with past research (Hur et al. 2009).

Effects of Gender on Responses to Guilt and Shame

As we hypothesized, women endorsed more approach strategies in shame and guilt situations than men (i.e., problem focused coping) and less withdrawal (i.e., denial). Women also endorsed more counterfactual thinking and support seeking in both kinds of situations than did men. The hypotheses about gender in this study were therefore supported by these findings except for one result, in which all women endorsed more avoidance in shame situations than men across cultures. These gender differences can be explained by gender roles and gender-stereotyped characteristics. Women are more likely to be socialized to the role of mother. As a result, women have become more sensitive to emotions than men. Women are typically described as a caring (Endendijk, 2016), and empathetic (Mestre et al. 2009). Even modern societies recognize and value these characteristics in women (Baez et al. 2017). In contrast, in the global context, men usually hold more dominant status than women in society. When they violate norms, men might be afraid of losing this dominance and want to keep their good image. They may also need to believe that they are still strong in front of others and in society and so try to forget what has happened. Consistent with this, for all four cultural groups, women reported more support seeking, more avoidance but less denial in shame situations.

For all four cultural groups in shame situations, women also reported more counterfactual thinking than men. Counterfactual thinking serves the largely beneficial function of behavior regulation (Roese and Epstude 2017) and connects directly to course correction, to goal cognition, and to behavior regulation (Epstude & Roesev, 2008). The gender difference we found might also have occurred because women typically report higher mental ruminations than men (Singh-Manoux 2000). One previous study found that women reported having more intense and more frequent experiences of emotions such as embarrassment, guilt, shame, and sadness than their male peers (Vienna 2016). They may therefore have a stronger desire to undo the negative acts because they may feel more distressed.

There were very few interactions with this sample. It is hard to know how to interpret the lack of a gender difference between Chinese Canadian women and men in response to shame situations, since there was no clear pattern with the other groups. The lack of gender difference in counterfactual thinking among only the mainland Chinese group, however, is worth exploring in more detail. Is it perhaps evidence of trying to solve the issue and prevent it from happening a second time? As such, it may be evidence of greater self-repair. For instance, when Chinese students get a poor grade, they might seek out more information. This interaction warrants further investigation

Conclusions

The results of this study show that culture affects responses to both shame and guilt, but that these differences do not extend to first generation Chinese Canadians who have lived in North America for most of their lives. Interestingly, even those students who are in Canada briefly as foreign students begin to shift how they respond to these emotions, suggesting that social norms on expression of shame and guilt work quickly to alter the expression of these powerful social emotions, and emphasize these emotions' social importance.

Limitations and Future Directions

Several limitations in this study should be considered in future research. First, most of the participants in this set of studies were undergraduate students and consequently generalization beyond university students must be made cautiously. University students may be more individualist than other members of the community, so there may be greater differences in samples drawn from non-university communities. They were also residing in large urban centers, which are also more individualist (Aycicegi-Dinn and Caldwell-Harris, 2013). It may therefore be worthwhile in the future to investigate non-university educated individuals living in other parts of the countries involved to determine the generalizability of the current findings.

Second, for mainland Chinese participants we only collected data from mainland China, but we did not collect data from Hong Kong (higher levels of Western influence) and Taiwan. In a future study, it would be important to collect data in multiple locations and see whether there are differences due to origin and ethnic group within China. Moreover, many Chinese immigrants in Canada are from those two areas, suggesting that Canadian Chinese may not share the same cultural heritage as mainland Chinese.

Third, we did not directly measure the acculturation of the international students and Chinese Canadian students. Although it is not unreasonable to infer that those who came to Canada after the age of 18 were less acculturated than those who came before the age of eight, variations within these groups as a function of their acculturation levels would be interesting to explore.

Fourth, we used self-report in this study. Participants' answers may have been subject to potential self-report bias but that bias may function differently in different cultural groups. For that reason, within culture comparisons are the most reliable. Respondents may also give defensive or interpretative answers due to self-esteem concerns or social desirability effects. The anonymity of the questionnaires should reduce these potential biases but cannot eliminate them completely. Different methodological approaches such as laboratory-based induction of responses to shame and guilt should also be examined.

The biggest limitation in this study is that the extent of experiencing shame and guilt was not measured in response to the scenarios and so we could not confirm whether the cultural differences were due to differences in the relative amount of shame or guilt experienced, or due to differences in how they respond to shame and guilt. Cho et al. (2011) found that people who reported that they were more likely to solve the problem following a shame or guilt-related situation felt more shame. However, participants in her study were less likely to avoid the problem and avoid others when experiencing more shame with their friends or classmates.

Given that self-regulation of shame and guilt are culturally patterned, there are some future directions for research into how people cope with these self-conscious emotions. One important possibility that needs to be explored in future investigations is identity might be explicitly measured (e.g., personal identity, social identity, collective identity) and the association with self-regulation of shame and guilt will be examined based on the variety of cultural environments and social norms. Another direction for research is the association between self-conscious emotions with perfectionism, one dimension socially prescribed perfectionism is associated with the experience of shame (Tangney and Dearing 2002). It would be interesting to examine these as well.

Despite these limitations, the findings obtained in this study were similar to previous studies (Tangney 1991, 1992), and support the theoretical and phenomenological literature (Lutwak et al. 2003) but deepen our understanding of how universal emotions like shame and guilt can be shaped by one's cultural environment.

Compliance with Ethical Standards

Appendix A

(1)   Selected items of self-regulation of shame and guilt

Please read the following scenarios carefully. Try to imagine yourself in each scenario:

1.   You are at a party and talking with some friends about the classes you took last term. You make a joke about how easy one class is, and how dumb a person would have to be not to get an A in this class. One of your friends looks shocked and hurt and you suddenly remember her telling you that she only got a D in the course last term and had to take the course again. You realize that she must think you are talking about her.

Imagine that you were in this situation. How likely is it that you would do the following?

	−3	−2	−1	0	1	2	3	
	Never use this strategy			Unsure		Definitely use	this strategy	
I would:								
1.	−3	−2	−1	0	1	2	3	Confront the problem directly.
2.	−3	−2	−1	0	1	2	3	Find a good method to solve the problem.
3.	−3	−2	−1	0	1	2	3	Apologize for my bad behaviour.
4.	−3	−2	−1	0	1	2	3	Not think about the event.
5.	−3	−2	−1	0	1	2	3	Keep my distance from the people who had seen what I had done.
6.	−3	−2	−1	0	1	2	3	Imagine a different outcome of this event.
7.	−3	−2	−1	0	1	2	3	Tell myself never do this again.
8.	−3	−2	−1	0	1	2	3	Wish that I had never done it or done it in another way.
9.	−3	−2	−1	0	1	2	3	Realize that everyone has similar things happen to them.
10.	−3	−2	−1	0	1	2	3	Tell myself that these feelings are not so bad.
11.	−3	−2	−1	0	1	2	3	Tell this story to someone else to get some advice.
12.	−3	−2	−1	0	1	2	3	Tell others about my unhappy feelings.
13.	−3	−2	−1	0	1	2	3	Other—not included in above lists: Explain: _____

(Each scenario has the same questions as above..)

2. It is the first real snowfall of the year, and you and some friends are throwing snowballs and laughing and chasing one another. Another friend shows up and calls your name. You have a snowball in your hand so you playfully throw it at him. But you throw it harder than you had intended, and it hits him in the face, breaking his glasses. He shouts and covers his face as blood starts to run from a cut above his eye.

3. You are looking to buy a used computer and find a great laptop that is advertised for about $100 more than you can afford. You ask a friend if you can borrow the $100 so that you can buy the computer, and promise to pay him back after you get your next pay check. Right after you get the computer, several major events happen in your life, and you completely forget about the money and don't pay him back.

4. A good friend confides in you about how much she is attracted to a man you both know, even though he already has a girlfriend and is clearly not interested in your friend. You promise that you won't tell anyone about this, but several weeks later this man's name comes up at a party, and you tell the people you are talking to about your friend's crush on this man.

5. You are in a store with some friends of yours and you see a pen with a funny picture on it. You think it's cute, but don't think it's worth the $10 they are asking for it. You look around and see that the store owner is talking to your friends and not paying attention to you. On an impulse, you grab the pen and slip it inside your coat. You then leave with your friends, without paying for the pen.

Appendix B

1a. Factor loadings for self-regulation of guilt in mainland Chinese

Items	Problem-focused coping	Denial and avoidance	Counterfactual thinking	Support seeking	Other (self-soothing)
Item 1	*.84*	.02	−.00	−.03	.12
Item 2	*.81*	−.06	.06	−.05	.02
Item 3	*.69*	−.08	−.06	−.03	−.27
Item 4	−.12	*.64*	.00	.08	.18
Item 5	−.17	*.73*	.09	−.08	−.13
Item 6	.06	*.53*	−.11	.03	−.24
Item 7	.24	.01	*−.52*	−.03	*−.56*
Item 8	.00	−.04	*−.90*	.03	−.08
Item 9	−.08	.13	−.44	−.15	.18
Item 10	.08	*.61*	−.09	−.07	.31
Item 11	.25	.03	.08	*−.75*	−.14
Item 12	−.10	−.04	−.08	*−.96*	.07

The italic data represents item loadings at least .40 in a direct oblimin rotation procedure

Note 1: Item 1: Confront the problem directly. Item 2: Find a good method to solve the problem. Item 3: Apologize for my bad behaviour. Item 4: Not think about the event. Item 5: Keep my distance from the people who had seen what I had done. Item 6: Imagine a different outcome of this event. Item 7: Tell myself never do this again. Item 8: Wish that I had never done it or done it in another way. Item 9: Realize that everyone has similar things happen to them. Item 10: Tell myself that these feelings are not so bad. Item 11: Tell this story to someone else to get some advice. Item 12: Tell others about my unhappy feelings

Note 2: Factors could not be extracted by using factor axis factoring in international Chinese group when split file

1b. Factor loadings for self-regulation of guilt in Chinese Canadian

Items	Problem-focused coping	Denial and avoidance	Counterfactual thinking	Support seeking	Other (self-soothing)
Item 1	*.98*	−.04	.16	.04	.06
Item 2	*.76*	.01	−.11	−.06	−.04
Item 3	*.85*	−.00	−.06	.01	−.03
Item 4	−.03	*.72*	.09	−.15	.14
Item 5	−.08	*.77*	.02	.08	−.12
Item 6	.04	.37	−.36	.22	.06
Item 7	−.06	−.11	*−.92*	−.08	−.04
Item 8	.14	.02	*−.77*	.06	.03
Item 9	.07	−.09	−.05	−.00	*.77*
Item 10	−.12	.15	.07	.05	*.67*
Item 11	−.02	−.12	−.02	*.87*	.10
Item 12	.02	.07	.05	*.98*	−.06

The italic data represents item loadings at least .40 in a direct oblimin rotation procedure

Note: Item 1: Confront the problem directly. Item 2: Find a good method to solve the problem. Item 3: Apologize for my bad behaviour. Item 4: Not think about the event. Item 5: Keep my distance from the people who had seen what I had done. Item 6: Imagine a different outcome of this event. Item 7: Tell myself never do this again. Item 8: Wish that I had never done it or done it in another way. Item 9: Realize that everyone has similar things happen to

them. Item 10: Tell myself that these feelings are not so bad. Item 11: Tell this story to someone else to get some advice. Item 12: Tell others about my unhappy feelings

1c. Factor loadings for self-regulation of guilt in European Canadian

Items	Problem-focused coping	Denial and avoidance	Counterfactual thinking	Support seeking	Other (self-soothing)
Item 1	1.00	−.02	−.15	.00	.05
Item 2	.89	−.04	.06	−.01	−.03
Item 3	.87	.06	−.18	−.02	−.01
Item 4	−.18	.57	.13	.05	.15
Item 5	−.01	.75	.35	.06	.07
Item 6	.00	.43	−.10	−.19	−.19
Item 7	.11	−.08	.91	.04	.06
Item 8	.00	−.08	.99	.05	.01
Item 9	.01	−.09	.11	−.22	.63
Item 10	.01	.19	−.05	.05	.97
Item 11	.04	−.06	−.08	−.89	.10
Item 12	.01	.02	−.02	−.87	.01

The italic data represents item loadings at least .40 in a direct oblimin rotation procedure

Note: Item 1: Confront the problem directly. Item 2: Find a good method to solve the problem. Item 3: Apologize for my bad behaviour. Item 4: Not think about the event. Item 5: Keep my distance from the people who had seen what I had done. Item 6: Imagine a different outcome of this event. Item 7: Tell myself never do this again. Item 8: Wish that I had never done it or done it in another way. Item 9: Realize that everyone has similar things happen to them. Item 10: Tell myself that these feelings are not so bad. Item 11: Tell this story to someone else to get some advice. Item 12: Tell others about my unhappy feelings

2a. Factor loadings for self-regulation of shame in international Chinese

Items	Problem-focused coping	Denial	Avoidance	Counterfactual thinking	Support seeking
Item 1	.94	.01	.10	.03	.01
Item 2	.94	−.04	.06	−.04	−.01
Item 3	.56	.07	−.51	−.02	−.28
Item 4	−.01	.73	−.06	−.22	.04
Item 5	−.15	.00	−.89	.03	.09
Item 6	−.11	.08	.12	−.96	.08
Item 7	.38	−.16	−.37	.15	−.01
Item 8	.32	−.18	−.22	−.51	.01
Item 9	.43	.05	.27	−.26	.47
Item 10	.03	.81	.02	.16	.21
Item 11	.01	.01	−.11	−.06	.93
Item 12	−.06	−.03	−.03	.01	.97

The italic data represents item loadings at least .40 in a direct oblimin rotation procedure

Note 1: Item 1: Confront the problem directly. Item 2: Find a good method to solve the problem. Item 3: Apologize for my bad behaviour. Item 4: Not think about the event. Item 5: Keep my distance from the people who had seen what I had done. Item 6: Imagine a different outcome of this event. Item 7: Tell myself never do this again. Item 8: Wish that I had never done it or done it in another way. Item 9: Realize that everyone has similar things happen to

them. Item 10: Tell myself that these feelings are not so bad. Item 11: Tell this story to someone else to get some advice. Item 12: Tell others about my unhappy feelings

Note 2: Factors could not be extracted by using factor axis factoring in mainland Chinese and Chinese Canadians when split file

Appendix C

Factor loadings for self-regulation of shame and guilt

Item	Oblique factor loading
Problem-focused coping of shame	
1. Confront the problem directly.	−.91
2. Find a good method to solve the problem.	−.86
3. Apologize for my bad behaviour.	−.52
Denial of shame	
4. Not think about the event.	.48
Avoidance of shame	
5. Keep my distance from the people who had seen what I had done.	.69
Counterfactual thinking of shame	
6. Imagine a different outcome of this event.	.56
7. Tell myself never do this again.	.61
8. Wish that I had never done it or done it in another way.	.98
Support seeking of shame	
11. Tell this story to someone else to get some advice.	− 1.00
12. Tell others about my unhappy feelings.	−.85
Problem-focused coping of guilt	
1. Confront the problem directly.	.98
2. Find a good method to solve the problem.	.84
3. Apologize for my bad behaviour.	.74
Denial and avoidance of guilt	
4. Not think about the event.	.59
5. Keep my distance from the people who had seen what I had done.	.72
Counterfactual thinking of guilt	
6. Imagine a different outcome of this event.	.37
7. Tell myself never do this again.	.85
8. Wish that I had never done it or done it in another way.	.87
Support seeking of guilt	
11. Tell this story to someone else to get some advice.	−.93
12. Tell others about my unhappy feelings.	−.88

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