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# Exploration of cultural values as a moderator of the relationship between emotion suppression and risky behaviors

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# Exploration of cultural values as a moderator of the relationship between emotion suppression and risky behaviors

## **Abstract**

The present study examined the relationship between emotion suppression, cultural values, and engagement in risky behaviors. The literature supports that emotion suppression is related to engagement in a variety of risky behaviors, but this may vary as a function of cultural values. That is, emotion suppression is relatively normative in certain cultures and may therefore not predict involvement in risky behavior for individuals from such groups. Therefore, the present study aimed to understand how emotion suppression and cultural values may interact in terms of their relationship with engagement in risky behaviors. The study also sought to investigate how engaging in risky behaviors affects psychological well-being. Furthermore, the study also sought to investigate the correlation between risky behaviors and cognitive reappraisal. Finally, for more exploratory purposes the study sought to examine correlations between risky behaviors and ethnic identity and collectivism.

The study included a sample of 565 college students aged 18 and older, enrolled at Eastern Michigan University. The mean age was  $21.09 \pm 5.36$ . The student sample was predominately female (72.6%) and White (65.5%). The present study found significant negative correlations between engagement in risky behaviors and collectivism, cognitive reappraisal, and psychological well-being; as well as, a significant positive correlation between engagement in risky behaviors and emotion suppression. Furthermore, a positive trend between European American values, emotion suppression, and involvement in risk behaviors was discovered. Limitations and implications for treatment and further research are discussed.

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EXPLORATION OF CULTURAL VALUES AS A MODERATOR OF THE  
RELATIONSHIP BETWEEN EMOTION SUPPRESSION AND RISKY BEHAVIORS

By

Alissa Sneed

A Senior Thesis Submitted to the

Eastern Michigan University

Honors College

in Partial Fulfillment of the Requirements for Graduation

with Honors in Psychology

Approved at Ypsilanti, Michigan, on this date August 01, 2016

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The study included a sample of 565 college students aged 18 and older, enrolled at Eastern Michigan University. The mean age was  $21.09 \pm 5.36$ . The student sample was predominately female (72.6%) and White (65.5%). The present study found significant negative correlations between engagement in risky behaviors and collectivism, cognitive reappraisal, and psychological well-being; as well as, a significant positive correlation between engagement in risky behaviors and emotion suppression. Furthermore, a positive trend between European American values, emotion suppression, and involvement in risk behaviors was discovered. Limitations and implications for treatment and further research are discussed.

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## Introduction

### *Emotion Regulation*

Emotions are one of the wonderful things about being human but sometimes they can be inconvenient. An individual may remember a really funny joke at a funeral and stifle a laugh. Or, she may be asked to stay later than usual for a shift at work, resulting in cancelling plans with friends, and resisting the urge to yell at her boss. In these two instances the individuals are using a strategy to protect their social and professional relationships. They are using what is called “emotion regulation.” According to Gross, Richards, and John (2006), “emotion regulation refers to attempts individuals make to influence which emotions they have, when they have them, and how these emotions are experienced and expressed.”

Emotion regulation has gained the attention of many researchers and a widely used measure, the Emotion Regulation Questionnaire (ERQ), has been developed to study the effects of frequent use of various emotion regulation strategies (Gross & John, 2003). Although there are various types of emotion regulation, for the ERQ, only two aspects that are used in “everyday life” were chosen as the primary focus (Gross & John, 2003; Gross, Richards, & John, 2006). The model used for the ERQ distinguishes between *response-focused* and *antecedent-focused* emotion regulation strategies (Gross, 1998; Gross & John, 2003; Gross, Richards, & John, 2006). Response-focused, or *expressive suppression*, involves inhibition of emotional expression (e.g., facial, verbal, gestural) after an emotional response has been evoked. Antecedent-focused, or *cognitive reappraisal*, is a strategy that involves changing the way one thinks of a situation after the fact, which in turn changes its emotional impact (Gross & John, 1998). An example of cognitive reappraisal is failing a class and instead of thinking of oneself as a failure an individual would instead think of it as a way to challenge him or herself, thereby preventing potentially negative emotions from surfacing and instead viewing it as a positive. Because cognitive

reappraisal changes the emotional impact of a situation from a negative to a positive, it is often thought of as the healthier and more positive emotion regulation strategy (Ehring, Tuschen-Caffier, Schnulle, Fischer, & Gross, 2010; Haga, Kraft, & Corby, 2009; Perez & Soto, 2011).

### *Effects of Emotion Suppression*

Early research suggests that emotion suppression can be detrimental to one's physical health, mental health, and social relationships (Butler, Lee, & Gross, 2007; English & John, 2013; Langner, Epel, Matthews, Moskowitz, & Adler, 2012; Richards & Gross, 1998; Su et al., 2015). Some of the negative effects of emotion suppression include memory loss, higher blood pressure, and lower satisfaction in relationships, negative self-perception, and disruptions in forming social relationships (Butler, Lee, & Gross, 2007; English & John, 2013; Gross & John, 2003; Richards & Gross, 1998). In a study conducted by Butler, Lee, & Gross, unacquainted women were asked to watch a war video about an historical bomb dropping to evoke emotion; however, one of the interactive partners in selected pairs was told to control her emotions and not show what she was feeling. The results of the study showed that suppressors' partners were less likely to pursue a friendship with their partners than partners of women who did not suppress their emotions (Butler, Lee, & Gross, 2007). However, the women who were less likely to form friendships when using emotion suppression were White women; in the same study, Asian women experienced less negative consequences from emotion suppression than White women (Butler, Lee, & Gross, 2007). Early literature fails to take into account cultural differences of people who practice emotion suppression; however, research has addressed this gap, with recent studies evaluating cultural differences (Butler, Lee, & Gross, 2007; English & John, 2013; Kwon, Yoon, Joornann, & Kwon, 2013).

### *Cultural Differences in Emotion Suppression*

With respect to cultural differences in emotion suppression, the most heavily researched comparisons have been between Asian cultures and American cultures. Asian cultures in comparison to American culture are very different regarding emotion responses. A primary difference is that Asian cultures are more collectivist (e.g., the groups' goals take precedence over individual goals) cultures versus European Americans, which includes those of predominately individualist (e.g., individual goals over group goals) cultures (Hui & Triandis, 1986; Su et al., 2015). Research suggests that emotional self-control is strongly associated with collectivism, meaning that collectivist cultures use emotion suppression more than individualist cultures (Su et al., 2015). However, even between collectivist cultures there are differences in emotion suppression. In a study conducted by Su et al., both Mexican and Chinese collectivist cultures experienced little to no negative effects from emotion suppression when suppressing negative emotions, such as, anger and sadness. However, when suppressing positive emotions, such as happiness and joy, Mexican participants experienced more negative consequences than the Chinese participants (Su et al., 2015). Asian values include not showing emotional responses very often as opposed to European American culture which places high value on expressing emotion (Kim, Li, & Ng, 2005). Because these two cultures seem to be on the opposite ends of the spectrum of emotion expression, they are convenient for use in research evaluating emotion suppression in different cultures.

### *Emotion Suppression, Depression, and Risky Behaviors*

Recent research has studied associations between use of emotion suppression in people with high depressive levels and its link to engagement in risky behaviors (Ehring et al., 2010; Langner et al., 2012; Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009). Research shows that emotion suppression is associated with depression, especially in

individuals with low social hierarchy and low SES (Ehring et al., 2010; Langner, Epel, Matthews, Moskowitz, & Adler, 2012). These individuals also have a greater risk of engaging in problematic behaviors. One study showed that college students with depressive symptoms were at greater risk for compulsive drinking than their peers without depressive symptoms (Pedrelli et al., 2011). This is consistent with other literature and research that also links alcohol use with other problematic behaviors such as self-injury, risky sexual behavior, and aggression (Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009).

### *College Students and Risky Behaviors*

College is often seen as the stepping stone into adulthood, where many go to “find themselves.” There is a common phrase referring to college days as the “best four years of your life”, but these years can also be the most dangerous. College students are a population that is often researched because of their engagement in and escalation of risky and addictive behavior, such as binge drinking, risky sexual behavior, and drug abuse (Brown & Vanable, 2007; Collins & Spelman, 2013; Cooper, 2002; Douglas et al., 1997; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Leigh, 1999; Perkins, 2012). Engaging in these types of high risk behaviors has been linked to social norms. That is, college students engage in more problematic behaviors than their non-college attending peers but they are much more likely to do so if they believe that their peers are doing so as well, particularly a close friend (Collins & Spelman, 2013; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002). Such behaviors can have a negative impact on psychological and physical health; for example, sexually transmitted infection (STI) rates range between 12% - 25% for college students (Cooper, 2002; Douglas, et al., 1997). The most common culprit seems to be excessive alcohol use. Not only can drinking high levels of alcohol be risky in its own right, it also increases the likelihood of engaging in other dangerous

behaviors, such as risky sexual behaviors (Brown & Venable, 2007; Cooper, 2002; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Leigh, 1999; Williams & Hasking, 2009). In a study conducted by Brown and Venable (2007), alcohol use was strongly correlated with unprotected vaginal sex between casual sexual partners and 55% of sexual encounters with casual sexual partners involved alcohol. Another study again found a significant correlation between alcohol use and unprotected sex with 15% - 22% of college students becoming pregnant or getting a partner pregnant (Douglas et al., 1997). So many studies observing many negative consequences from engagement in this behavior warrant research as to why it is so frequently done. Research suggests that engagement in these behaviors is often used as an emotional inhibitor (Ehring et al., 2010; Langner et al., 2012; Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009).

### *Present Study*

To our knowledge, this is the first study to investigate the moderating role of Asian versus European American cultural values on the relationship between college students' use of emotion suppression and engagement in risky behaviors. As mentioned above, college students are a demographic that engages in the riskiest behaviors and one reason, among many, may be to inhibit emotions. This study aimed to assess the relationship between emotion suppression and engagement in risky behaviors, and evaluate the impact of cultural values on the relationship between emotion suppression and engagement in risky behaviors. The study aimed to examine the flourishing well-being of individuals who engage in high levels of risky behaviors. Finally, although more exploratory in nature, cognitive reappraisal was evaluated in the same fashion as emotion suppression.

## Method

### Measures

Asian American Values Scale (AAVS): (Kim, Li, & Ng, 2005) is a 42-item scale to assess if an individual's values align more with Asian values. Higher scores on this measure indicates values aligned with Asian values. The present study used this measure to assess individuals' values.

The scale has 5 subscales: Collectivism: 7 questions, Conformity to Norms: 7 questions, Emotional Self-Control: 8 questions, Family Recognition through Achievement: 14 questions, and Humility: 6 questions. The scoring is on a 7-point Likert-type scale and 13 items are reverse scored. Refer to Appendix A.

European American Values Scale for Asian Americans (EAVS): (Wolfe, Yang, Wong, & Atkinson, 2001) is a 25-item scale used to determine if an individual's values are more aligned with European American values. Higher scores on this scales indicates alignment with European American values. As with the AAVS, the present used this scale to assess individuals' values. The items are scored on a 4-point scale and 17 items are reversed scored. Refer to Appendix B.

Emotional Regulation Questionnaire (ERO): (Gross & John, 2003) is a 10-item scale used to measure the participants' tendency to use two types of emotion regulation: 1) Cognitive Reappraisal and 2) Emotion Suppression. The items are scored on a 7-point Likert-type scale and split into two categories of regulation. This measure was used to assess emotion regulation processing. Refer to Appendix C.

Composite Measure of Problem Behaviors (CMPB): (Kingston, Clarke, Ritchie, & Remington, 2011) is a 46-item scale used to measure an individual's engagement in problem behaviors. This measure was the measure used to assess engagement in risky behaviors. It has 10 subcategories: Nicotine Use, Deliberate Self-Harm, Excessive Internet/Computer Game Use, Drug Use,

Excessive Exercise, Excessive Alcohol Use, Binge Eating, Sexual Promiscuity, Aggression, and Restrictive Eating; and there are about 4-6 items per category. The items are scored from 1-6; 12 items are reversed scored. Refer to Appendix D.

Flourishing Scale: (Diener et al., 2010) is an 8-item scale used to assess psychological well-being by measuring both negative and positive feelings. This measure was used to assess how risky behaviors interact with individuals' psychological health. The items are scored on a 7-point Likert scale. Refer to Appendix E.

The Multigroup Ethnic Identity Measure (MEIM): (Phinney, 1992) is a 15-item scale used to assess the level of enculturation of an individual to his/her ethnic group. Research shows that being more confident of one's identity and culture is linked to higher self-esteem (Phinney, 1992). However, this measure was included to assess if enculturation in one's ethnic group, specifically Asians, is related to engagement in risky behaviors. The items are scored on a 4-point Likert scale; 12 items measure enculturation and the final 3 ask about the individual's and his or her parents' ethnicities. Refer to Appendix F.

The Individualism and Collectivism Scale: (Triandis & Gelfand, 1998) is a 16-item scale assessing level of individualism and collectivism. The items are scored on a 9-point Likert scale. Because a lot of Collectivist cultures also engage in high levels of suppression (Su, et al., 2015), this measure was used to assess how individualism and collectivism relates to engagement in risky behaviors. Refer to Appendix G.

## Hypotheses

H<sub>1</sub>: It was hypothesized that higher levels of emotion suppression would be positively correlated with levels of involvement in risky behaviors.

H<sub>2</sub>: It was hypothesized that higher scores on the AAVS would be negatively correlated with level of involvement in risky behaviors.

H<sub>3</sub>: It was hypothesized that higher scores on the EAVS would be positively correlated with level of involvement in risky behaviors.

H<sub>4</sub>: It was hypothesized that Asians/Asian Americans with higher level of enculturation of Asian values would be negatively correlated with level of involvement in risky behaviors.

H<sub>5</sub>: It was hypothesized that higher scores of collectivism would be negatively correlated with level of involvement in risky behaviors.

H<sub>6</sub>: It was hypothesized that higher levels of cognitive reappraisal would be negatively correlated with levels of involvement in risky behaviors.

H<sub>7</sub>: It was hypothesized that higher involvement with risky behaviors would be negatively correlated with lower scores on the Flourishing Scale.

H<sub>8a</sub>: It was hypothesized that individuals who score high on emotion suppression and high on the Asian American Values Scale will have the lowest rates of engagement in risky behaviors.

H<sub>8b</sub>: It was hypothesized that individuals who score high on emotion suppression and high on the European American Values Scale will have the highest rates of engagement in risky behaviors.

### Procedure

Participants were recruited through SONA research system, a system commonly used by students looking to participate in research studies for extra credit in college courses. The system is implemented for Psychology courses at EMU. Participants completed a survey consisting of 170 questions made up by demographics as well as eight measures (see “Measures” and

appendices). For their participation, participants were granted one half hour of research credit. Prior to data collection, the study gained approval (i.e., Exemption) by the Eastern Michigan University Human Subjects Review Committee.

## Results

### Participants

The study included a sample of 565 college students aged 18 and older, enrolled at Eastern Michigan University. The mean age was  $21.09 \pm 5.36$ . The student sample was predominately female (72.6%) and White (65.5%). Unfortunately, the Asian/Asian American population was one of the smallest in the study (3.2%). Refer to Table 1 for complete summary.

**Table 1**

Demographics	Participants (N=565)
Gender (% Female)	72.6%
Race (% White)	65.5%
Age	$21.09 \pm 5.36$
Education (% 15 years (college Junior) and lower)	87.3%
Marital status (% Single)	80.7%
Sexual orientation (% Heterosexual)	87.1%
Economics (% "solidly middle class" and lower)	69.4%
Residency (% Parent/Guardian Home)	32.4%

### Hypotheses 1 – 7

Pearson Correlation Coefficient were used to test Hypothesis 1 through 7.

#### *Hypothesis 1*

It was hypothesized that higher levels of emotional suppression would be positively correlated with levels of involvement in risky behaviors. The study found statistically significant results supporting this hypothesis ( $r = .135, p = 0.01$ ). Refer to Table 2.

*Hypothesis 2*

It was hypothesized that higher scores on the Asian American Values Scale would be negatively correlated with level of involvement in risky behaviors. Again, the Pearson Correlation Coefficient was used to test this hypothesis. The study did not find a significant correlation between high scores on the entire AAVS and levels of involvement in risky behaviors ( $r = .006, p = 0.01$ ). However, when the subscales were tested for exploratory reasons, the results yielded a significant correlation ( $r = .149, p = 0.01$ ) between the subscale “Emotional Self-Control” and level of involvement in risky behaviors. Refer to Table 2.

*Hypothesis 3*

It was hypothesized that higher scores on the European American Values Scale would be positively correlated with level of involvement in risky behaviors. But, as with the AAVS, there was again no significant correlation between European American values and involvement in risky behaviors ( $r = -.084, p = 0.01$ ). However, as you’ll see in Hypotheses 8a and 8b, there is a trend for a positive relationship between European American values and involvement in risky behaviors. Refer to Table 2, Figure 1, and Figure 2.

*Hypothesis 4*

It was hypothesized that Asians/Asian Americans with higher levels of enculturation of Asian values would be negatively correlated with level of involvement in risky behaviors. This hypothesis was not supported by the data. Nonsignificant results are attributed to a low population of Asians/Asian Americans; in total the A/AA population was 3.2% of the study sample. However, when the entire MEIM was analyzed, there was a significant positive

correlation between enculturation in one's own culture and flourishing ( $r = .276, p = 0.01$ ). Refer to Table 2.

#### *Hypothesis 5*

Research shows that countries who use high levels of suppression are usually collectivist countries (Su et al., 2015). Because of the research in this area, it was hypothesized that higher scores of collectivism would be negatively correlated with level of involvement in risky behaviors. Data collected supported this hypothesis, finding a significant negative correlation between collectivism and involvement in risky behaviors ( $r = -.183, p = 0.01$ ). Purely for exploratory purposes, the relationship between collectivism and cognitive reappraisal was tested via Pearson Correlation Coefficient, which yielded a significant positive correlation between collectivism and reappraisal ( $r = .339, p = 0.01$ ). Refer to Table 2.

#### *Hypothesis 6*

Cognitive reappraisal is often regarded as the more adaptive emotion regulation strategy by researchers in the field (Ehringm Tuschen-Caffier, Schnulle Fischer, & Gross, 2010; Haga, Kraft, & Corby, 2009; Perez & Soto, 2011). Because of this research, it was expected that cognitive reappraisal would work contrary to emotion suppression and have a positive effect on individuals. It was hypothesized that higher levels of cognitive reappraisal would be negatively correlated with levels of involvement in risky behaviors. The results of the study supported this hypothesis yielding a significant negative correlation between cognitive reappraisal and risk behavior involvement ( $r = -.147, p = 0.01$ ). Conversely, there was a positive correlation between reappraisal and flourishing. The study found a positive correlation between reappraisal and psychological well-being ( $r = .400, p = 0.01$ ), which also supports the research suggesting that

cognitive reappraisal is a more adaptive emotion regulation strategy than emotion suppression.

Refer to Table 2.

### *Hypothesis 7*

Research suggests that engaging in problematic behaviors can lead to depression, physiological distress, and other psychological disorders (Cooper, 2002; Douglas et al., 1997; Ehring et al., 2010; Langner et al., 2012; Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009). Because of the literature available on the topic, it was hypothesized that higher involvement with risky behaviors would be negatively correlated with lower scores on the Flourishing Scale. The study found a significant negative correlation between involvement and psychological well-being ( $r = -.300, p = 0.01$ ). Refer to Table 2.

**Table 2**

Correlation Matrix for Risky Behaviors (N=565)

Predictor Variable	Risky Behaviors Involvement Levels
1. Suppression	.135**
2. AAVS	.006
3. EAVS	-.084
4. MEIM	-.044
5. Collectivism	-.183**
6. Reappraisal	-.147**
7. Flourishing	-.300**

\*\*significant at 0.01 level (2-tailed)

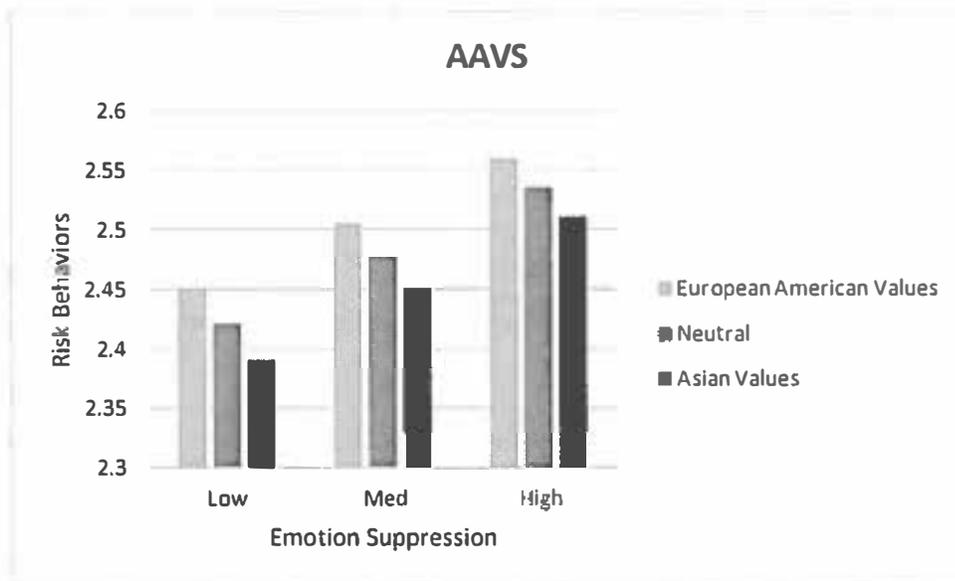
The purpose of this study was to examine the relationship between emotion suppression and engagement in risky behaviors with cultural values serving as a moderator. The main research hypothesis, hypothesis 8, was divided into two separate hypotheses, H<sub>8a</sub> and H<sub>8b</sub>, to make categorizing easier. To test hypotheses H<sub>8a</sub> and H<sub>8b</sub>, regression analyses were conducted,

using the Hayes' Process macro (Hayes, 2013). For both hypotheses, participants were divided into three categories: "European American", "Asian American", and "Neutral". This categorization was based on what the participants' values aligned with on each scale. For example, those with higher scores on the AAVS would be placed in the "Asian American" category, lower scores would be "European American", and those who were in the neither high nor low were placed in the "Neutral" category. This system was used for both scales.

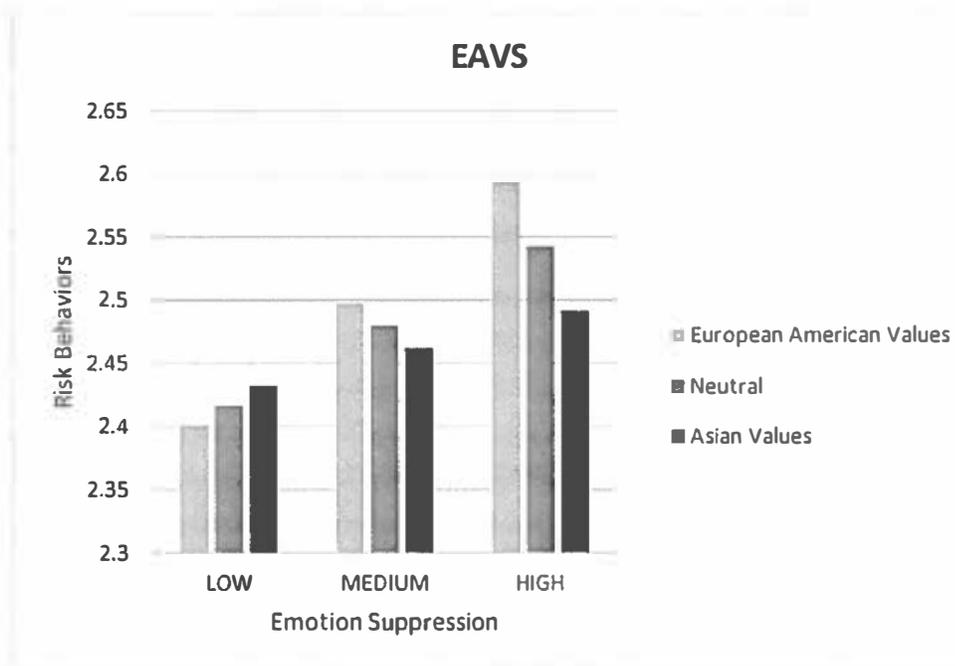
The categories for "Low", "Medium", and "High" were divided based on participants' responses on the emotion suppression subsection of the ERQ. "Low" represented a score of  $\leq 9$  (the lowest score from the data), "Medium" represented a score of  $\leq 15$ , and finally "High" represented a score of  $\leq 21$ . Those are seen on the x-axis. The y-axis are the numbers of risky behaviors that the participants engaged in on average. Figure 1 is the results of the Asian American Values Scale; and Figure 2 is the results of European American Values Scale.

The results show that on average when individuals with European American values engage in high levels of suppression, they also engage in higher levels of risky behaviors. This is consistent between both the AAVS and the EAVS. However, on the y-axis the results show that on average everyone is engaging in between 2.3 and 2.6 risky behaviors. Although there is minimal difference in the amount of risky behaviors individuals engage in, the trend shows that on average people with European American values engage in more risky behaviors when they use higher levels of suppression. Refer to Figure 1 and Figure 2.

**Figure 1.** Mean Number of Risk Behaviors as a function of Cultural Values (as assessed by Asian American Values Scale) and Level of Emotion Suppression



**Figure 2.** Mean Number of Risk Behaviors as a function of Cultural Values (as assessed by European American Values Scale) and Level of Emotion Suppression



**Discussion**

The present study examined the relationship between emotion suppression, cultural values, and engagement in risky behaviors. The literature supports that emotion suppression is

related to engagement in a variety of risky behaviors, but this may vary as function of cultural values. That is, emotion suppression is relatively normative in certain cultures and may therefore not predict involvement in risky behavior for individuals from such groups. Therefore, the present study aimed to understand how emotion suppression and cultural values may interact in terms of their relationship with engagement in risky behaviors. The study also sought to investigate how engaging in risky behaviors affects psychological well-being. Furthermore, the study also sought to investigate the correlation between risky behaviors and cognitive reappraisal. Finally, for more exploratory purposes the study sought to examine the relationship between risky behaviors and ethnic identity and collectivism. College students was the sample population used in this study because of their engagement in and escalation of risky and addictive behavior, such as binge drinking, risky sexual behavior, drug abuse, etc. (Brown & Vanable, 2007; Collins & Spelman, 2013; Cooper, 2002; Douglas et al., 1997; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Leigh, 1999; Perkins, 2012).

Recent research has found a link between emotion suppression and engagement in risky behaviors, such as excessive alcohol abuse, drug use, etc. (Ehring et al., 2010; Langner et al., 2012; Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009). Drawing from the literature, using the ERQ and CMPB, the study anticipated finding a positive correlation between frequent use of emotion suppression and high levels of engagement in risky behaviors. Consistent with literature suggesting that emotion suppression is detrimental to physical and mental health, the study found that individuals who engage in emotion suppression were more likely to engage in high levels of risky behaviors as well.

Cognitive reappraisal, which involves changing the way one thinks of a situation which in turn changes its emotional impact, is often referred to as the more adaptive emotion regulation

strategy by researchers (Ehring, Tuschen-Caffier, Schnulle, Fischer, & Gross, 2010; Haga, Kraft, & Corby, 2009; Perez & Soto, 2011). Based on the literature, it was expected that cognitive reappraisal would work in the opposite direction than emotion suppression does in relation to risky behaviors. It was hypothesized that using cognitive reappraisal would be more positive for one's health therefore individuals who do so would engage in fewer risky behaviors. This hypothesis was supported by the data, meaning that those who used more cognitive reappraisal engage in fewer risky behaviors. For more exploratory purposes, cognitive reappraisal was compared with psychological well-being and the results yielded a significant positive correlation between the two. This supports the literature that suggests that cognitive reappraisal is a more adaptive emotion regulation strategy than emotion suppression.

Research has found that individuals with high depressive levels are more likely to engage in risky behaviors than their peers who do not have high depressive levels (Ehring et al., 2010; Langner et al., 2012; Pedrelli et al., 2011; Stappenbeck & Fromme, 2014; Williams & Hasking, 2009). Drawing from this research, the present study sought to examine how engaging in high levels of risky behaviors and psychological well-being (flourishing) were associated. It was expected that individuals who engaged in more problematic behaviors would have lower scores on the flourishing scale, reflective of worse psychological well-being. This hypothesis was supported by the data and further supports the literature finding that engaging in risky behaviors is inconsistent with psychological well-being.

Being aware of one's own identity has been shown to have positive effects on one's self-esteem and mental health (Phinney, 1992). Taking from this literature, the study expected that Asians/Asian Americans with more enculturation of Asian values would engage in fewer risky behaviors. However, this hypothesis was not supported by the data. The insignificant results

were attributed to the low Asian/Asian American population within the study. To more broadly test whether or not the literature applied, the MEIM was tested with flourishing, and results yielded a significant positive correlation between the two. This suggests, as the literature does, that living in line with one's subcultural expectations is psychologically rewarding.

Collectivist countries/cultures are those which values the welfare of the group as being more important than the welfare of the individual (Hui & Trandis, 1986; Kim, Li, & Ng, 2015; Su et al., 2015; Trandis & Gelfand, 1998). One of many Asian values is collectivism, and the literature shows that Asian cultures and other collectivist cultures engage in emotion suppression more frequently than individualist cultures, such as those from European American backgrounds (Kim, Li, & Ng, 2005; Su, et al., 2015). However, probably because emotion suppression is culturally normative for those from collectivist cultures, they tend not to experience many negative consequences from engaging in this emotion regulation strategy (Butler, Lee, & Gross, 2007; English & John, 2013; Kwon, Yoon, Joormann, & Kwon, 2013; Su et al., 2015). Drawing from this literature, it was expected that people who have higher levels of collectivism would engage in lower levels of risky behaviors. This hypothesis was supported by the data, which yielded a significant negative correlation between collectivism and engagement in risky behaviors.

For more exploratory purposes, the relationship between cognitive reappraisal and collectivism was tested. The results showed that individuals who had higher levels of collectivism also engaged in higher levels of cognitive reappraisal, contrary to what is generally reported in the literature (Kim, Li, & Ng, 2005; Su et al., 2015). Although it is unknown why this results emerged, future research should further explore this relationship.

Research suggests that across cultures emotion suppression does not have the same effects (Butler, Lee, & Gross, 2007; English & John, 2013; Kwon, Yoon, Joormann, & Kwon, 2013). Because of the differences regarding emotion regulation, the most heavily researched are comparisons between Asian cultures and American culture. The present study sought to find differences between Asian values and European American values and its relation to risky behaviors. It was expected that individuals with higher Asian values would engage in less risky behaviors; contrastingly, it was expected that individuals with higher European American values would engage in more risky behaviors. Neither of these hypotheses were supported by the data. However, on the subscales in the AAVS, the study found a significant correlation between Emotional Self-Control and engagement risky behaviors. This finding further supports the hypothesis above and literature in the field.

The primary research hypotheses were hypothesis 8a and 8b. It was hypothesized that individuals who score high on emotion suppression and high on the Asian American Values Scale would have the lowest rates of engagement in risky behaviors. It was also hypothesized that individuals who score high on emotion suppression and high on the European American Values Scale would have the highest rates of engagement in risky behaviors. Although the hypotheses did not yield significant results, a trend was found between emotion suppression, cultural values, and engagement in risky behaviors. The trend suggests that overall when individuals with more European American values engage in high levels of emotion suppression, they fare worse than those with more Asian values. These findings support the early research findings that emotion suppression is detrimental to one's physical and mental health (Butler, Lee, & Gross, 2007; English & John, 2013; Langner, Epel, Matthews, Moskowitz, & Adler, 2012; Richards & Gross, 1998; Su, et al., 2015). However, it further supports recent research that finds

that emotion suppression affects members of various cultural groups differently (Butler, Lee, & Gross, 2007; English & John, 2013; Kwon, Yoon, Joormann, & Kwon, 2013).

### *Limitations & Implications*

A primary study limitation was that we obtained a very low percentage of Asians/Asians Americans who participated in this study. A larger Asian/Asian American population would have given more accurate representation and the large disparities between ethnicities may have contributed to insignificant findings. For further exploration, it would be beneficial to target more Asians/Asians Americans for more generalizable results and greater statistical power to test our main hypotheses.

Study limitations also include the cross sectional nature of the data, which limit the inferences that can be drawn about casual relationships that may exist between study variables. As the sample was drawn from a college population, generalizability may not extend to those from less educated groups; and since there is an age range between college students and their parents' generation, college students tend to be more acculturated than their parents.

The present study found a trend between cultural values, emotion suppression, and engagement in risky/addictive behaviors. There are many treatments available for people who engage in frequent addictive behaviors such as Cognitive-Behavioral Therapy, Motivational Interviewing, and others (Jhanjee, 2014). However, many of these treatments are broadly designed and do not take culture into account. The findings of the present study could extend to help mental health professionals better help patients with addictive behaviors when providing treatments.

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## Appendices

### Appendix A

#### Asian American Values Scale

- 1 (Strongly Disagree)
- 2 (Mildly Disagree)
- 3 (Moderately Disagree)
- 4 (Neither agree nor disagree)
- 5 (Mildly Agree)
- 6 (Moderately Agree)
- 7 (Strongly Agree)

*Asterisk (\*) indicates a reversed scored item.*

#### Collectivism:

- 1. The welfare of the group should be put before that of the individual.
- 2. One's efforts should be directed toward maintaining the well-being of the group first and the individual second.
- 3. One's personal needs should be second to the needs of the group.
- 4. The needs of the community should supersede those of the individual.
- 5. One need not always consider the needs of the group.\*
- 6. The group should be less important than the individual.\*
- 7. One need not sacrifice oneself for the benefit of the group.\*

#### Conformity to Norms

- 1. One should recognize and adhere to the social expectations, norms, and practices.
- 2. One should adhere to the values, beliefs, and behaviors that one's society considers normal and acceptable.
- 3. Conforming to norms provides one with identity.
- 4. One need not blend in with society.\*
- 5. Conforming to norms is the safest path to travel.
- 6. Conforming to norms provide order in the community.
- 7. One should not do something that is outside of the norm.

#### Emotional Self-Control

- 1. It is better to show emotions than suffer quietly\*
- 2. One should be expressive with one's feelings.\*
- 3. Openly expressing one's emotions is a sign of strength.\*
- 4. It is better to hold one's emotions inside than to burden others by expressing them.
- 5. It is more important to behave appropriately than to act on what one is feeling.
- 6. One should not express strong emotions.
- 7. One's emotional needs are less important than fulfilling one's responsibilities.

8. One should not act based on emotions.

#### Family Recognition through Achievement

1. One should achieve academically since it reflects one's family.
2. Succeeding occupationally is an important way of making one's family proud.
3. Getting into a good school reflects well on one's family.
4. Failing academically brings shame to one's family.
5. One should go as far as one can academically and professionally on behalf of one's family.
6. One's academic and occupational reputation reflects the family's reputation.
7. Academic achievement should be highly valued among family members.
8. One's achievement and status reflect the whole family.
9. Making achievements is an important way to show one's appreciation for one's family.
10. One's educational success is a sign of personal and familial character.
11. One should work hard so that one won't be a disappointment to one's family.
12. It is one's duty to bring praise through achievement to one's family.
13. Receiving awards for excellence need not reflect well on one's family.\*
14. Children's achievements need not bring honor to their parents.\*

#### Humility

1. One should be able to brag about one's achievements.\*
2. One should be able to boast about one's achievements.\*
3. One should not sing one's own praises.
4. One should not openly talk about one's accomplishments.
5. One should be able to draw attention to one's accomplishments.\*
6. Being boastful should not be a sign of one's weakness and insecurities.\*

## Appendix B

## European American Values Scale for Asian Americans

1 (Strongly Disagree)

2 (Disagree)

3 (Agree)

4 (Strongly Agree)

*Asterisk (\*) indicates a reversed scored item.*

1. Being humble is better than expressing feelings of pride.\*
2. I prefer not to take on responsibility unless I must.\*
3. It is OK to allow others to restrict one's sexual freedom.\*
4. Monetary compensation is not very important for a job.\*
5. It is OK for a woman to have a child without being in a permanent relationship.\*
6. I cannot approve of abortion just because the mother's health is at risk.\*
7. Sometimes, it is necessary for the government to stifle individual development.\*
8. Cheating on one's partner doesn't make a marriage unsuccessful.\*
9. Greater emphasis on individual development is not a good thing.\*
10. I do not like to serve as a model for others.\*
11. A woman should not have a child unless she is in a long term relationship.\*
12. I have always enjoyed serving as a model for others.
13. Partners do not need to have similar values in order to have a successful marriage.\*
14. Single women should not have children and raise them alone.\*
15. It is OK if work interferes with the rest of my life.\*
16. Luck determines the course of one's life.\*
17. A student does not always need to follow the teacher's instructions.
18. The world would be a better place if each individual could maximize his or her development.
19. Faithfulness is very important for a successful marriage.
20. No one is entitled to complete sexual freedom without restriction.\*
21. You can do anything you put your mind to.
22. Faithfulness is not important for a successful marriage.\*
23. I follow my supervisor's instructions even when I do not agree with them.\*
24. I think it is fine for an unmarried woman to have a child.
25. Friends are very important.

## Appendix C

## Emotion Regulation Questionnaire

1 (Strongly Disagree)

2 (Mildly Disagree)

3 (Moderately Disagree)

4 (Neutral)

5 (Mildly Agree)

6 (Moderately Agree)

7 (Strongly Agree)

Items 1, 3, 5, 7, 8, and 10 are referring to *Cognitive Reappraisal*.

Items 2, 4, 6, and 9 are referring to *Expressive Suppression*.

1. When I want to feel more *positive* emotion (such as joy or amusement), I *change what I'm thinking about*.
2. I keep my emotions to myself.
3. When I want to feel less *negative* emotion (such as sadness or anger), I *change what I'm thinking about*.
4. When I am feeling *positive* emotions, I am careful not to express them.
5. When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.
6. I control my emotions by *not expressing them*.
7. When I want to feel more *positive* emotion, I *change the way I'm thinking* about the situation.
8. I control my emotions by *changing the way I think* about the situation I'm in.
9. When I am feeling *negative* emotions, I make sure not to express them.
10. When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.

## Appendix D

## Composite Measure of Problem Behaviors

*(It's like me to...) 1 (very like me) to 6 (very unlike me)*

*Asterisk (\*) indicates a reversed scored item.*

## Nicotine use:

- ...smoke tobacco.
- ...feel the urge to have a cigarette.
- ...feel irritation/frustration if I am in a non-smoking environment.
- ...be preoccupied by thoughts about smoking when smoking is prohibited.
- ...prefer being in places where smoking is prohibited.\*

## Deliberate Self-Harm:

- ...sometimes cause myself direct bodily harm by, for example, cutting or burning myself.
- ...feel the urge to intentionally harm myself.
- ...sometimes intentionally prevent scars or wounds from healing.
- ...sometimes scratch or bite myself to the point of scarring or bleeding.

## Excessive Internet/Computer Game Use:

- ...sometimes feel pre-occupied with the internet/computer games.
- ...find that my work performance or productivity suffers because of my internet/computer game use.
- ...surf the net/play computer games before doing something else that needs doing.
- ...unsuccessfully try to cut back my use of the internet/computer games.
- ...easily limit my use of the internet or video games.\*

## Drug Use:

- ...be excited by the opportunity of taking drugs (this includes cannabis).
- ...sometimes actively seek out drugs for personal use (this includes cannabis).
- ...say no to drugs (this includes cannabis).\*
- ...sometimes feel that I need to take drugs (this includes cannabis).
- ...generally have no interest in taking drugs (this includes cannabis).\*
- ...sometimes think that I might have a drug problem (this includes cannabis).

## Excessive Exercise:

- ...exercise more than three times a week.
- ...be content if I am prevented from exercising for a week.\*
- ...exercise even when I am feeling tired and/or unwell.
- ...sometimes feel tension and/or excitement in anticipation of doing exercise.
- ...skip doing exercise for no good reason.\*

## Binge Eating:

- ...always stop eating when I feel full.
- ...only eat when I am hungry.

- ...find it difficult to stop eating after certain foods.\*
- ...sometimes eat to the point of physical discomfort.\*

**Sexual Promiscuity:**

- ...sometimes have more than one sexual partner.
- ...sometimes engage in sexual activity with someone I only just met.
- ...sometimes engage in sexual activity with someone when I really shouldn't.

**Aggression:**

- ...control my temper.\*
- ...never resort to violence.\*
- ...be aggressive when sufficiently provoked.
- ...sometimes get so angry that I break something.

**Restrictive Eating:**

- ...deliberately take small helpings as a mean of controlling my weight.
- ...avoid eating when I am hungry.
- ...ignore dietary details (e.g., calorie content) when choosing something to eat.\*
- ...have a long list of things that I dare not eat.
- ...claim I have already eaten when this is not true.

## Appendix E

## Flourishing Scale

1 (Strongly Disagree)

2 (Disagree)

3 (Slightly Disagree)

4 (Neither agree nor disagree)

5 (Slightly Agree)

6 (Agree)

7 (Strongly Agree)

1. I lead a purposeful and meaningful life.
2. My social relationships are supportive and rewarding.
3. I am engaged and interested in my daily activities.
4. I actively contribute to the happiness and well-being of others.
5. I am competent and capable in the activities that are important to me.
6. I am a good person and live a good life.
7. I am optimistic about my future.
8. People respect me.

## Appendix F

## The Multigroup Ethnic Identity Measure

1 (Strongly Disagree)

2 (Disagree)

3 (Agree)

4 (Strongly Agree)

1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.
2. I am active in organizations or social groups that include mostly members of my own ethnic group.
3. I have a clear sense of my ethnic background and what it means for me.
4. I think a lot about how my life will be affected by my ethnic group membership.
5. I am happy that I am a member of the group I belong to.
6. I have a strong sense of belonging to my own ethnic group.
7. I understand pretty well what my ethnic group membership means to me.
8. In order to learn more about my ethnic background, I have often talked to other people of my ethnic group.
9. I have a lot of pride in my ethnic group.
10. I participate in cultural practices of my own group, such as special food, music, or customs.
11. I feel a strong attachment towards my own ethnic group.
12. I feel good about my cultural or ethnic background.
13. My ethnicity is:
  - 1) Asian or Asian American, including Chinese, Japanese, and others.
  - 2) Black or African American.
  - 3) Hispanic or Latino, including Mexican American, Central American, and others.
  - 4) White, Caucasian, Anglo, European American; not Hispanic.
  - 5) American Indian/Native American
  - 6) Arab or Arab American
  - 7) Mixed; Parents are from two or more different groups
  - 8) Other (write in)
14. My father's ethnicity is (use numbers above).
15. My mother's ethnicity is use numbers above).

## Appendix G

## Individualism and Collectivism Scale (Culture-Orientation Scale)

*Range from: 1 (never or definitely no) to 9 (always or definitely yes)*

Horizontal Individualism items:

1. I'd rather depend on myself than others.
2. I rely on myself most of the time; I rarely rely on others.
3. I often do "my own thing".
4. My personal identity, independent of others, is very important to me.

Vertical Individualism items:

1. It is important that I do my job better than others.
2. Winning is everything.
3. Competition is the law of nature.
4. When another person does it better than I do, I get tense and aroused.

Horizontal Collectivism items:

1. If a coworker gets a prize, I would feel proud.
2. The well-being of my coworkers is important to me.
3. To me, pleasure is spending time with others.
4. I feel good when I cooperate with others.

Vertical Collectivism items:

1. Parents and children must stay together as much as possible.
2. It is my duty to take care of my family, even when I have to sacrifice what I want.
3. Family members should stick together; no matter what sacrifices are required.
4. It is important to me that I respect the decisions made by my group.