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Emotional Expressiveness in Trauma Narratives across Asian and European Americans: Effects of Implicit Audience and Ethnic Identity

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Previous studies have reported that emotional expression carries different meanings for different people depending on ethnicity and the context of measuring emotional expressiveness. This study examined the effects of ethnicity, implicit audience, and ethnic identity on emotional expressiveness. We collected data from 136 female undergraduate students (68 East Asian Americans and 68 European Americans). Self-disclosure, emotional expressivity, and ethnic identity were also assessed. The participants were asked to write an essay about their traumatic experiences. For half of the participants, their ethnic identity was primed before writing the essays. Within each of the two conditions, half of the participants were asked to imagine that their own ethnic group would read their narratives, whereas the other half were asked to imagine that another ethnic group would read theirs. A multivariate analysis of covariance was conducted. Contrary to expectations, Asian Americans expressed more pride and sad words in their narratives, and more sadness in the ingroup condition than European Americans. Across both ethnic groups, participants with higher ethnic identity expressed less affect and positive emotions. Ethnic identity priming did not affect emotional expressiveness. The findings indicate that cultural differences in emotional expressiveness are complex, with ethnic identity, participants' ethnicity, and ethnicity of the implicit audience assuming significant roles.

Keywords: audience, culture, emotional expression, ethnic identity, priming

The construct of *emotional expressiveness*, or a general disposition toward expressing different emotions across various situations, has captured the attention of researchers in diverse study areas. Research on individual and cultural differences suggests that expression can carry diverse meanings for different people (De Leersnyder, Mesquita, Kim, Eom, & Choi, 2014; Wang & Lau, 2018) and differs across gender, ethnicity, and personality (Davis et al., 2012).

Cross-cultural comparisons of emotional expression and self-disclosure have found that Asians in North America report lower levels of self-disclosure (Saykeo & Lawrence, 2018) and behavioral affective expression (Crowe, Raval, Trivedi, Daga, & Raval, 2012) and less expressive confidence, weaker emotional impulses, and more attempts at masking their feelings (Gross & John, 1998) when compared with their European American counterparts. Such empirical findings support the importance of the role of culture in emotional self-disclosure and expressing particular emotions (Soto, Perez, Kim, Lee, & Minnick, 2011).

Moreover, cross-cultural studies on emotional expressiveness have demonstrated inconsistencies depending on the context. Researchers hypothesize that because of Asian Americans' concern about disclosing distress to strangers, a face-to-face interview condition would minimize expressions of distress compared to an anonymous questionnaire condition, whereas such differences would not be found among European Americans (Horng & Coles,

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2014; Okazaki, 2000). However, profile analysis of emotion ratings before and during a social performance task revealed that Asian Americans reported higher levels of anxious emotions as well as positive and negative emotions across conditions (i.e., having a confederate of the same or different ethnicity) than European Americans.

Okazaki (2000) observed an apparent paradox in the current conceptualizations of emotional expression and emotional distress among Asian Americans. Asians are often portrayed as holding strong reservations about emotional expression in favor of emotional restraint and control, in addition to preferring not to share their distress with others (Uba, 1994). This is in apparent contrast to other empirical findings suggesting that Asian Americans report significantly elevated levels of emotional distress symptoms (Okazaki, 2000) compared to European Americans. This paradox may be partly explained in research findings, suggesting that the salience of different aspects of self-identity, or self-schema shifts depending on social context, especially for Asian Americans (Oishi & Diener, 2001), and this shift may affect tendencies to express emotions. The present study thus sought to examine ethnic identity priming and ethnic matching between the participants and perceived target audiences as social contexts that may shift the salience of ethnic identity and affect the degree of expressiveness.

In addition, through a social comparison process, people who are similar to the self are labeled as the *ingroup*, whereas those who differ from the self are categorized as the *outgroup* (Pickett & Brewer, 2001; Stets & Burke, 2000). Ethnic matching between the participants and a target audience is a salient process by which ingroup-outgroup distinctions can be made. Moreover, it is possible that individuals from collectivistic cultures, such as East Asian Americans, would exhibit more emotional expressivity to ingroup members than outgroup members, whereas European Americans may demonstrate fewer ingroup-outgroup differences (Matsumoto, Yoo, & Fontaine, 2008). Asian Americans may find it appropriate to display emotion differently depending on whether the audience is a person of the same ethnicity versus not, whereas European Americans may not make this distinction.

Individuals high in ethnic identity are also more likely to see themselves as ingroup members (Spears, Doosje, & Ellemers, 1997) and feel close and similar to ingroup members (Grigoryan, 2020), when compared to those with low ethnic identity. One way to manipulate the salience of ingroup-outgroup distinctions is to prime ethnic identity. When a particular social identity is made salient, individuals are likely to think of themselves as being representative of that social category (Smith & Henry, 1996). For example, when a collective identity is activated, the most salient features of participants' self-concept become interdependent characteristics (Tropp & Wright, 2001). Thus, it is possible that individuals from collectivistic cultures may become more sensitive to ingroup-outgroup distinctions when ethnic identity is primed.

This study explored how the degree of emotional disclosure, a main component of psychotherapy, measured through emotions expressed on an expressive writing task are affected by (a) ingroup (same ethnicity) versus outgroup (different ethnicity) implicit target audiences and (b) priming of ethnic identity. We hypothesized that there would be a difference in the degree of emotional expression in the narratives as a function of ethnicity and type of implicit audience, with the degree of emotional expressiveness depending on the particular context within which the emotional expression occurred—whether one was expressing to an ingroup versus an outgroup audience or one's ethnic identity was primed. It was hypothesized that Asian Americans would be less emotionally expressive in the outgroup than ingroup audience condition and would also be less emotionally expressive when their ethnic identity was primed than when it was not.

Method

Participants

A total of 136 female undergraduate students (68 East Asian Americans and 68 European Americans) attending a university in the United States participated in the study for partial course credit. The inclusion criteria were as follows: birth in the United States, at least second-generation immigration status, or immigration before the age of five. An additional inclusion criterion for Asian American participants required them to be of East Asian descent. This study was approved by the institutional review board of the university where the research was conducted.

The mean age of Asian- and European-Americans were 19.6 ($SD = 2.17$) and 19.4 ($SD = 2.04$) years, respectively. To determine

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if there were significant differences between the two ethnic groups of students, *t* tests and Fisher's exact tests were conducted. The results indicated that the generation status of Asian Americans was more recent than that of European Americans ($z = -7.22$, $p < .000$). Mothers of Asian Americans had significantly lower educational attainment than their European American counterparts ($z = -2.54$, $p < .01$). No other between-group differences in demographic variables were significant.

According to the self-reported demographic questions, of the 68 Asian Americans in the sample, 49 (72.1%) were born in the United States and among those who were foreign-born, the mean number of years in the United States was 15.7 years ($SD = 5.7$). A total of 45 (66.2%) identified themselves as Chinese, 18 (26.5%) as Korean, and 5 (7.4%) as Japanese. For all the Asian Americans, both parents were also of Asian descent. Because mothers' educational level did not correlate significantly with any of the emotional expressiveness outcome measures (e.g., $r = -.02$, $p < .85$ with Berkeley Expressivity Questionnaire [BEQ]), only the effect of generation status was statistically controlled in further analyses involving ethnicity.

Procedure

The participants were randomly assigned to groups of two to five. They completed informed consent forms as well as a brief demographic questionnaire and self-reported measures to measure their tendency toward self-disclosure, emotional expressivity, and ethnic identity.

Following the questionnaires, the participants wrote a 20-minute essay about one traumatic or disturbing event. They were instructed using a prompt used in prior research as follows (Pennebaker, Kiecolt-Glaser, & Glaser, 1988):

> During this time, I want you to write about one of the most traumatic and upsetting experiences of your entire life. The important thing about this is that you write about your deepest thoughts and feelings. Ideally, whatever you write about should be intensely personal.

To examine implicit audience effects on emotional expressiveness in the essays, different instructions were added. For each ethnic group, half the members were randomly assigned to either an ingroup or an outgroup audience condition. For the ingroup implicit audience condition, the participants were prompted as follows:

> Before you begin to write this story, we would like you to imagine disclosing this event and the feelings you had experienced to an individual of your own ethnic racial background. This will mean that you will be disclosing this event to someone who IS ___ (fill in the blank with your own ethnicity).

Participants assigned to the outgroup implicit audience condition were told to imagine disclosing the story to "an individual who is not of your own ethnic racial background. This will mean that you will be disclosing this event to someone who is NOT _____ (fill in the blank with your own ethnicity)."

In addition, before participating in the expressive writing task, the participants in the priming condition were given an additional writing task describing their ethnic ancestry and the most important family holiday they celebrated, particularly with people of their own ethnic background.

To augment the effect of salience in priming, the ethnicity of the investigator and other participants were also manipulated according to the experimental conditions. Thus, for the ingroup audience and ethnic identity priming condition, the participants were grouped with two to three other participants of the same ethnicity, and the ethnicity of the investigator was matched to theirs. For the outgroup/ethnic identity priming condition, an investigator of a different ethnicity provided instructions to the participant groups.

Measures

Self–disclosure Index (SDI; Miller, Berg, & Archer, 1983)

The SDI is an 11-item scale that asks individuals to indicate the extent of disclosure on a scale, ranging from 0 (*discuss not at all*) to 4 (*discuss fully and completely*) (e.g., "My worst fears"). The version used in this study, which specifies willingness to disclose to a stranger in the future, can be considered an "expectation" measure and thus a better predictor of future disclosure behavior than a "history" measure. In the present study, Cronbach's coefficient for the SDI was .88 for the entire sample and .89 and .86 for Asian Americans and European Americans, respectively.

Berkeley Expressivity Questionnaire (BEQ; Gross & John, 1995)

This 16-item scale assesses the extent of general expression and three facets of expressive behavior: impulse strength, negative ex-

pression, and positive expression on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (e.g., "I am sometimes unable to hide my feelings even though I would like to"). In this study, Cronbach's coefficient for the BEQ was .83 for the entire sample and .81 and .85 for Asian Americans and European Americans, respectively.

Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992)

This scale was developed to broadly measure ethnic identity across the major dimensions of identity achievement, affirmation and belonging, and ethnic behaviors. Fourteen items measuring ethnic identity are rated on a 4-point Likert-type scale from 1 (*strongly disagree*) to 4 (*strongly agree*). An additional six items are rated on the same scale to measure other-group orientation. The scores were derived by summing across the items and obtaining the mean. Higher scores indicate a great sense of identification with or belonging to one's own ethnic group. In the present study, the MEIM was also found to be reliable, with a Cronbach's alpha of .87 for the entire sample (.73 for Asian Americans; .87 for European Americans).

Expressive writing task

To systematically compare the degree to which the participants expressed emotions in their narratives, the *Linguistic Inquiry and Word Count-Second Version* (SLIWC) (Pennebaker & Francis, 1999; Pennebaker & King, 1999) was used. This computerized text analysis program allows researchers to derive several word-count categories. The SLIWC counts words related to emotions and cognitive processing. The SLIWC outcome measures analyzed in the present study denote the relative percentage of total word use in the narratives. The percentage of specific words representing emotions was considered to represent the amount of specific emotions expressed in writing (e.g., Nakash & Brody, 2006). For the present study, the outcome measure of a composite of both positive and negative emotion word usage was used as a general index of emotional expression. In addition, the study examined the primary emotion dimensions of the percentage of negative emotion words (sad, anxiety, shame), and positive emotion words (pride, joy). Furthermore, four discrete emotion words (pride, shame, sad, and anxiety) were examined separately. Negative emotions such as shame, sadness, and anxiety are considered important, as they are commonly addressed affects in the therapy context (e. g., Ford, Lam, John, & Mauss, 2018). "Pride" can be categorized as a positive emotion positive emotion; specifically, however, it is regarded as an "other-focused emotion," or affect that is "associated with others in a social context" (Aaker & Williams, 1998). It was deemed important to include an other-focused emotion in the study to examine potential cultural differences (Kitayama, Mesquita, & Karasawa, 2006).

Results

Preliminary Analyses

The correlations between self-disclosure, emotion expressivity and participants' ethnic identity are presented in Table 1, indicating that people who disclose more express their emotions more. A preliminary analysis of variance showed no preexisting differences in the sample by experimental condition on the self-reported measures assessing tendency to self-disclose, ($F(3, 132) = .79$, $p < .50$) and express emotions ($F(3, 132) = 1.63$, $p < .19$). Asian Americans did not show significant differences in the tendency to self-disclose, ($F(3, 64) = .23$, $p < .88$) and express emotions, ($F(3, 64) = .89$, $p < .45$) across the four experimental conditions. European Americans also did not show significant differences in the tendency to self-disclose, ($F(3, 64) = 1.56$, $p < .21$) and express emotions, ($F(3, 64) = 1.23$, $p < .31$) across the four experimental conditions. Thus, participants in the four experimental conditions within each ethnic group were matched on self-reported tendency to disclose and express emotions before the experimental manipulations were implemented.

Differences in self-reported tendency to self-disclose and express emotions, in addition to a sense of ethnic identity between Asian and European American participants were tested using one-way analyses of covariance (ANCOVA) with ethnic group as the between-subjects variable and scores on the SDI, BEQ, and MEIM as

Table 1. *Correlations Between Self-disclosure, Emotion Expressivity, Ethnic Identity (N = 136)*

	Self-disclosure	Emotion Expressivity	Ethnic Identity
Self-disclosure	-		
Emotion Expressivity	.21**		
Ethnic Identity	-.01	.08	

Note. $^{**}p < .01$.

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the outcome variables, including generation status as a covariate. The main effect of ethnicity on SDI and BEQ was not significant ($F(1, 133) = .95$, $p < .33$ and $F(1, 133) = .15$, $p < .70$, respectively). However, the main effect of ethnicity was significant for the score on the ethnic identity measure (MEIM) ($F(1, 133) = 12.08$, $p < .001$), with Asian Americans showing a higher ethnic identity score ($M = 3.20$, $SD = .39$) than European Americans ($M = 2.63$, $SD = .62$).

Multivariate Analyses

A 2 (Ethnic Group) × 2 (Audience) × 2 (Priming) multivariate analysis of covariance (MANCOVA) was conducted to assess the effect of ethnic group, audience composition, and priming status on the emotional expressiveness variables in the expressive writing task with generation status as a covariate. Table 2 shows the means and standard deviations of the SLIWC emotion variables by ethnicity and experimental condition.

Narrative emotion variables

The analyses revealed an overall significant effect of ethnicity on the percentage of words denoting pride ($F(1, 127) = 4.35$, $p < .04$) and sadness ($F(1, 127) = 4.02$, $p < .05$) in the expressive writings. Unexpectedly, Asian Americans reported significantly more pride ($M = .11$, $SD = .19$) and sadness ($M = 1.27$, $SD = .87$) in the expressive writing task than European Americans ($M = .08$, $SD = .14$ and $M = 1.00$, $SD = .61$, respectively). There were no other significant main effects of ethnicity on the remaining emotion variables, thus failing to provide evidence supporting the hypothesis that Asian Americans would be less emotionally expressive (Table 3).

The hypotheses concerning audience, priming manipulations and the interaction between audience and ethnic identity priming conditions were not confirmed. Contrary to the prediction, there were no significant interactions between the participants' ethnicity and audience condition ($F(1, 127) = .08$, $p < .78$), and priming condition ($F(1, 127) = .70$, $p < .41$), on the general affect/total emotion word SLIWC outcome variable. This suggests that Asian Amer-

Table 2. *Means and Standard Deviations of SLIWC Emotion Variables by Ethnicity and Experimental Condition*

Variable	Asian American (n = 68)				European American (n = 68)			
	Primed		Not Primed		Primed		Not Primed	
	I	O	I	O	I	O	I	O
Affect	5.34 (1.26)	5.24 (1.86)	5.71 (1.71)	5.85 (1.97)	4.89 (1.38)	4.94 (1.20)	4.85 (1.36)	5.06 (1.58)
Positive Emotion	1.83 (.73)	1.85 (.80)	2.08 (.86)	2.24 (1.39)	2.04 (.91)	1.86 (.71)	1.72 (.86)	1.75 (.84)
Negative Emotion	3.43 (1.08)	3.36 (1.42)	3.62 (1.45)	3.53 (1.61)	2.83 (1.22)	3.05 (1.11)	3.03 (1.09)	3.25 (1.16)
Pride	.18 (.27)	.06 (.13)	.11 (.20)	.08 (.12)	.02 (.06)	.10 (.13)	.11 (.19)	.08 (.16)
Shame	.21 (.26)	.25 (.32)	.23 (.30)	.31 (.44)	.24 (.36)	.29 (.52)	.21 (.17)	.10 (.11)
Sad	1.41 (.85)	1.19 (.92)	1.44 (1.01)	1.04 (.69)	.63 (.33)	.99 (.46)	1.06 (.39)	1.35 (.89)
Anxiety	.59 (.35)	.71 (.66)	.72 (.51)	.79 (.61)	.91 (.63)	1.00 (.78)	.96 (.68)	.82 (.64)

Note. I = Ingroup audience condition; O = Outgroup audience condition.

Table 3. *Results of Analyses of Covariance by Ethnicity, Priming, and Audience Condition*

Variables	Ethnicity	Priming	Audience	Ethnicity × Priming	Ethnicity × Audience
df	1, 127	1, 127	1, 127	1, 127	1, 127
Affect	1.90	.91	.13	.70	.08
Positive Emotion	.17	.09	.02	2.86	.16
Negative Emotion	.11	.71	.11	.00	.48
Pride	1.43*	.03	1.43	1.13	1.78
Shame	.16	.45	.16	1.76	.33
Sad	4.02*	1.91	.01	3.31	5.36*
Anxiety	1.99	.04	.07	.60	.35

Note. Numbers represent *F* values.
*$p < .05$.

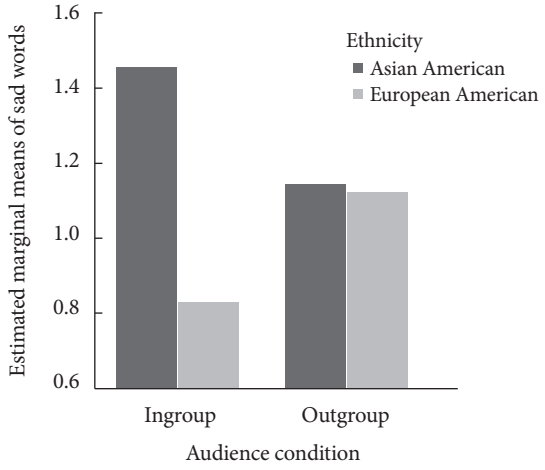

Figure 1. *Analysis of covariance results illustrating the interaction between ethnicity and audience condition in accounting for variation in percentage of sad words.*

icans were not less expressive than European Americans across audience conditions (i.e., regardless of having an ingroup or outgroup audience) or priming conditions (i.e., whether their ethnic identity is primed or not).

However, a significant interaction between ethnicity and audience condition was found in the percentage of sad words ($F(1, 127) = 5.36$, $p < .02$). According to follow-up interaction comparisons, the percentage of sad words in the ingroup audience condition was significantly different across the two ethnic groups ($F(1, 132) = 10.41$, $p < .002$), with Asian Americans using more sad words ($M = 1.43$, $SD = .92$) than European Americans ($M = .85$, $SD = .42$). There were no differences between the two ethnic groups in the outgroup condition ($F(1, 132) = .11$, $p < .74$) (Figure 1).

Predicting affect outcome variables in the expressive writing tasks

Table 4 presents the finding of the regression analysis of emotion measures derived from the narratives. The overall percentage of total affect words in the expressive writings was negatively predicted by ethnic group and ethnic identity ($F(3, 132) = 3.53$, $p < .02$) coding information: Asian American = 0, European American = 1. The ethnic group explained a significant amount of variance in total affect word frequency ($\beta = -.24$, $t(134) = -2.08$, $p < .04$). Unexpectedly, European Americans expressed less affect in their writings than Asian Americans.

Table 4. *Multiple Regression Analysis Predicting SLIWC Affect Variables from Generation Status, Ethnic Group, and Ethnic Identity*

Outcome Variable	β	R^2	*F* change	*p*
Affect				
Step 1 GS[a]	-.15	.02	3.14	.08
Step 2 Ethnic Group	-.24*			
MEIM[b]	-.22*	.07	3.66	.03
Step 3 Ethnic Group × MEIM	.28	.08	.08	.78
Positive Emotion				
Step 1 GS	-.10	.01	1.23	.27
Step 2 Ethnic Group	-.13			
MEIM	-.25*	.06	3.35	.04
Step 3 Ethnic Group × MEIM	.09	.06	.80	.37
Negative Emotion				
Step 1 GS	-.11	.01	1.63	.20
Step 2 Ethnic Group	-.21			
MEIM	-.11	.04	1.84	.16
Step 3 Ethnic Group × MEIM	-.03	.04	.12	.73
Pride				
Step 1 GS	.07	.01	.70	.40
Step 2 Ethnic Group	-.25			
MEIM	-.05	.04	2.27	.11
Step 3 Ethnic Group × MEIM	.07	.04	.54	.46
Shame				
Step 1 GS	-.10	.01	1.33	.25
Step 2 Ethnic Group	-.00			
MEIM	-.05	.01	.14	.87
Step 3 Ethnic Group × MEIM	-.01	.01	.01	.94

[a]Higher scores indicate higher generation status.
[b]Higher scores indicate higher degree of ethnic identity.

Ethnic identity in both Asian Americans and European Americans also accounted for a significant amount of variance in affect frequency ($\beta = -.22$, $t(134) = -2.26$, $p < .03$), suggesting that participants with a lower degree of ethnic identity expressed more affect than those with a higher degree of ethnic identity. Only ethnic identity scores also significantly predicted the degree of positive emotions in the writing ($F(3, 132) = -2.65$, $p < .05$) such that participants with a lower sense of ethnic identity expressed more positive emotions in the writings compared to individuals with a higher sense of ethnic identity.

Discussion

The present study examined the effects of ethnicity, implicit audience, and ethnic identity on emotional expressiveness in college-

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aged Asian- and European-Americans. The results of this study contribute to a more differentiated understanding of the related factors and highlight the complexity of the relationships among ethnicity, emotional expressiveness, and social context.

The results indicate that ethnicity affects the affective quality of narrative writings. It was hypothesized that Asian Americans would express less emotions depending on the context within which the expression occurred compared to European Americans. Contrary to our hypothesis, Asian Americans expressed more general affect, pride, and sadness in their narratives than European Americans, supporting the idea that cross-cultural differences in emotional expression are context-and sample-dependent. Specifically, such findings suggest that if immigrants are exposed to a new host culture, their pattern of emotional expression may start to resemble that of the majority culture (Mesquita, De Leersnyder, & Albert, 2014). Most participants were second-generation immigrants or 1.5-generation Asian Americans who immigrated at a very early age, and had already adapted to the host culture. Moreover, ethnic identity seems to be less important in a globalized world.

The present findings also demonstrate the same paradox reported by Okazaki and colleagues (Okazaki, 2000; Okazaki, Liu, Longworth, & Minn, 2002). This suggests a discrepancy between a preconceived notion of how Asian Americans *should* express emotions and how they *actually* feel and express emotions. One explanation for the finding that Asian Americans expressed more sadness in the written disclosure task may be attributable to Asian Americans being skewed more toward negative emotional expression than European Americans (Sims et al., 2018). It is also possible that as a minority group living in America, Asian Americans are exposed to more experiences eliciting sadness, such as racial discrimination, than European Americans.

A puzzling aspect of the findings is the absence of ethnic group differences for certain discrete emotions. Shame, for example, has been found to be more salient in collectivistic cultures (Wei, Liu, Ko, Wang, & Du, 2020), and it is also used more frequently as a mechanism of social control. Nevertheless, the frequency with which shame words were included in the narratives was found to be similar for both ethnic groups. This may be because of the possibility that immigrants' actual emotions tend to become more similar to those of the host culture (Mesquita et al., 2014). Second, the current study did not examine the interpersonal or public expression of such emotions, which may differ from the extent to which shame is expressed privately.

In general, except in the case of sadness, systematic investigation of implicit audience effects on emotional expressiveness in the narratives did not result in significant findings. It is possible that for European Americans, *gender matching* assumed a more significant role in which the ingroup-outgroup categorization was made than ethnicity-based categorization. Although this idea was not tested in the present study, it has been indicated that European Americans disclose more affect to females than to males (Brody & Hall, 2008). European Americans may generalize the concept of the female gender across both Asian and European American women more than Asian Americans, thus not differentiating how much and what types of emotion they express to these groups. This hypothesis that can be addressed in future research. Additionally, it is interesting that the implicit audience effect on expressing "sadness" was found for each group. This exceptional result implies that many societal-psychological factors (e.g., social norms) should be considered when examining the effect of audience's ethnicity.

The findings regarding ethnic identity were mixed but provide some evidence that ethnic identity plays a moderating role in predicting emotional expressiveness. Participants with a lower degree of ethnic identity in both ethnic groups were likely to express more affect and positive emotions. This finding is somewhat puzzling but explainable in that people who identify more with their ethnic group are less open to emotional expressiveness. The findings about in the present sample concerning ethnic identity are limited to a unidimensional understanding of ethnic identity (high/low identification with one's own ethnic group) rather than a bidimensional understanding (extent of identifying with both one's own ethnic culture and the dominant culture (Mariscal & Morales, 2015).

The hypothesis that Asian Americans would express more emotion to an ingroup rather than outgroup audience when their ethnic identity had been explicitly primed was not confirmed. One explanation may lie in the possibility that Asian American individuals, low in ethnic identity, may have exhibited a form of prime-resistant behavior, or "reactance," behaving in a more American way when exposed to Asian primes; whereas those high in ethnic identity may have tended to demonstrate prime-consistent behav-

ior. Research has demonstrated that the self-relevance of the priming stimuli and the participants' sensitivity to such stimuli exert differential effects on behavior (Shih, Ambady, Richeson, Fujita, & Gray, 2002).

Several limitations of the present study are worth mentioning. The methods of recruitment may have introduced considerable self-selection into the study, although this likely did not differ across the two ethnic groups. The reliance on an undergraduate student sample limited the generalizability of the findings to a college or non-clinical population, and the inclusion of only females further limited the study's generalizability. Moreover, the participants' language abilities, personality traits, and trauma types they experienced need to be included or controlled in the analysis, but such data were not collected. Furthermore, Asian Americans who attend universities in the United States tend to be more fluent in English and more acculturated to American culture than the rest of this largely immigrant population. It is thus possible that Asian American college students may be less likely to conform to Asian cultural norms than a less educated Asian American population. Nonetheless, this study found ethnic differences regarding emotional expressiveness even among college students, suggesting the potentially powerful role of culture in the construct of emotional expressiveness.

The findings of this study are also limited to those who write or disclose negative experiences. Writing or expressing positive emotions should be more specifically investigated in future research, given the potential cross-cultural differences in ego-focused emotions such as pride. Creating specific contexts that make desirable the inhibition of positive emotions or the expression of negative emotions can allow the study of whether specific situational influences can influence positive and negative emotional expression. Further research should also investigate more fully how verbal and nonverbal behaviors change in different induction procedures, such as emotion generated in face-to-face interactions as well as in different social situations, such as different gender pairings.

In conclusion, this study highlights the complexity of the relationship among ethnicity, implicit audience, ethnic identity, and self-perceived and narrated degree of emotional expressiveness and disclosure. By demonstrating the salience of ingroup-outgroup audience distinctions for Asian Americans in particular, the present study underscores the importance of culture in affecting the relevance of particular social contexts and contributing to emotional expressiveness. The social interaction pattern between the self and others as defined by cultural rules may transform the nature of emotional expressions.

Author contributions statement

YE, assistant professor at Seoul Graduate School of Counseling Psychology, led the drafting of the manuscript and consulted on the research design. LRB, professor at Boston University, consulted on research design. SHP, associate professor at Yonsei University, collected and analyzed data, led manuscript preparation, served as the principal investigator, and supervised the research process. All authors provided critical feedback, participated in revision of the manuscript, and approved the final submission.

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