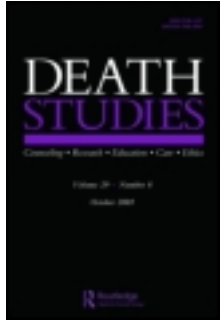


This article was downloaded by: [Georgia Southern University]

On: 01 April 2013, At: 07:38

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Death Studies

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/udst20>

Suicide Proneness in American and Japanese College Students: Associations with Suicide Acceptability and Emotional Expressivity

Motoko Saito ^a, Jeffrey Klibert ^b & Jennifer Langhinrichsen-Rohling ^c

^a Denton State Supported Living Center

^b Georgia Southern University

^c University of South Alabama

Accepted author version posted online: 01 Apr 2013.

To cite this article: Motoko Saito, Jeffrey Klibert & Jennifer Langhinrichsen-Rohling (2013): Suicide Proneness in American and Japanese College Students: Associations with Suicide Acceptability and Emotional Expressivity, *Death Studies*, DOI:10.1080/07481187.2012.699910

To link to this article: <http://dx.doi.org/10.1080/07481187.2012.699910>

Disclaimer: This is a version of an unedited manuscript that has been accepted for publication. As a service to authors and researchers we are providing this version of the accepted manuscript (AM). Copyediting, typesetting, and review of the resulting proof will be undertaken on this manuscript before final publication of the Version of Record (VoR). During production and pre-press, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal relate to this version also.

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Suicide Proneness in American and Japanese College Students: Associations with Suicide Acceptability and Emotional Expressivity

Motoko Saito¹, Jeffrey Klibert², Jennifer Langhinrichsen-Rohling³

¹Denton State Supported Living Center, ²Georgia Southern University, ²University of South Alabama

Received: October 27, 2011; Accepted: May 10, 2012

Corresponding Author: Jeffrey Klibert, Assistant Professor of Psychology Georgia Southern University – Carroll Building, 209 Forrest Dr. Box 8041 Statesboro, GA 30460
Tel.: 912-478-7282 – jklibert@georgiasouthern.edu

Abstract

This study considered whether suicide acceptability and emotional expressivity were associated with suicide proneness in American and Japanese women and men. Participants included 417 (283 women, 134 men) American and 396 (243 women, 150 men) Japanese college students. Regression models indicated that suicide acceptability predicted unique variance in suicide proneness for both American and Japanese women and men. However, emotional expressivity contributed to understanding the suicide proneness of American college students only. Culturally appropriate prevention and intervention implications associated with reducing suicide acceptance and cultivating well-being and resiliency are offered.

KEYWORDS: Keywords: Suicide, Culture, College Students, Suicide Acceptability, Emotional Expressivity

Cross-cultural investigations of self-harm behaviors consistently indicate that adolescents and young adults are at an increased risk for committing suicide compared to many other age groups (De Munck, Portzky, & Van Heeringen, 2009). However, rates of suicide for adolescents and young adults vary both cross-culturally and by gender (e.g., Langhinrichsen-Rohling, Friend, & Powell, 2009). For example, in 2009, completed suicide rates for Japanese men and women (aged 20-24) were 29.9 and 13.7 per 100,000,

ACCEPTED MANUSCRIPT

respectively. Alternatively, the completed suicide rates for American men and women (aged 20-24) were 20.3 and 3.4 per 100,000 (National Adolescent Health Information Center, 2006). Suicide is the leading cause of death among young adults in Japan, but only the third leading cause of death among young adults in the United States (Center for Disease Control and Prevention, 2007; Statistics and Information Department, Ministry of Health, Labor, and Welfare, 2009). Clearly there is a need to consider both culturally-relevant and gender-specific factors related to suicidal behavior of adolescents and young adults from both countries.

Existing efforts to prevent suicide have often focused on youth who are already expressing less lethal types of suicidal behavior (i.e., suicide gestures, suicide ideation). Identifying individuals who are engaging in less lethal types of suicide behavior (e.g., intervening with inordinate risk takers) is an important prevention strategy. In keeping with this goal, researchers have delineated a global construct of suicide proneness in adolescents and young adults (Lewinsohn, Langhinrichsen-Rohling, Rohde, & Langford, 2004). Suicide proneness is comprised of four behaviors: health and illness; risk and injury; death and suicide; and self-related. Delineating among these four suicide proneness indices can help identify individuals who are engaging in life-threatening behavior that may be less overtly suicidal and thus, missed by other, more overt, suicide assessment strategies. Consistent with theory, empirical research has demonstrated that all four suicide prone behaviors correlate significantly with more serious and lethal suicide behaviors in youth (Langhinrichsen-Rohling & Lamis, 2008).

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

In a preliminary study from the present data, *total* suicide proneness scores were elevated in Japanese as compared to American college students (Lamis, Saito, Klibert, Malone, & Langhinrichsen-Rohling, in submission). The current study extends these findings by examining culture and gender differences among the *four disparate* suicide proneness behaviors. However, with the exception of Lamis et al.'s study, few, if any, cross-cultural studies have identified culture *and* gender specific risk factors to suicide proneness. Examining culture-specific risk factors is likely to aid American and Japanese mental health professionals in developing specific intervention and prevention strategies for at-risk college women and men (Langhinrichsen-Rohling, et al., 2009). Specifically, two potentially important predictors of suicide proneness are the focus of the current study: suicide acceptability and emotional expressivity.

American college students tend to perceive suicide as unacceptable, unnatural, or immoral (Domino & Takahashi, 1991). Compared to Asian cultures, Americans are more likely to perceive suicide “as a violation of social trust, as an act to evade social responsibility, and as an act against one’s duty to God” (Young, 2002, p. 417). Correspondingly, using Domino’s Suicide Opinion Questionnaire (SOQ), McAuliffe and colleagues (2003) demonstrated that suicide ideators from western cultures have a distinct attitudinal profile as compared to non-ideators. Suicide ideators view suicide as more acceptable, such that a single unit increase on the normality subscale of the SOQ increases the odds of being a suicide ideator by 42%. In another study, endorsing the

ACCEPTED MANUSCRIPT

belief that people have a right to die by suicide predicted unique variance in both American women and men's suicide ideation scores, even after controlling for depression and hopelessness (Gibb, Andover, & Beach, 2006). Moreover, hopelessness and depression were only related to suicide ideation among men with more positive attitudes towards suicide.

In contrast, from a historical perspective, Japanese “cultural logic defines suicide as the ultimate expression of personal will,” which is the key tenet in the cultural phenomenon known as the *kakugo no jisatsu* or “suicide of resolve” (Kitanaka, 2008, p. 153). Kitanaka suggests that the “suicide of resolve” is perpetuated through the glamorization of suicidal expressions in Japanese art and media. Frequent exposure to such societal messages may increase the legitimacy of suicide, as it portrays this behavior as a natural or acceptable means of escaping shame and maintaining honor when confronted with perceived rejection, disappointment, and/or incompetence (Kitanaka, 2008). Considering that the prevailing attitudes underlying “suicide of resolve” remain strong within Japanese society (Okajima, 2005), Japanese students who believe that suicide is acceptable might be at higher risk for future suicidality (Sakamoto, Tanaka, Neichi, Sato, & Ono, 2006). However, this contention has not been studied empirically within the Japanese culture. The current study was designed to fill this gap by considering the degree to which suicide acceptability relates to increased suicide proneness for college women and men in Japan and the United States.

ACCEPTED MANUSCRIPT

A second important correlate of suicide proneness might be emotional expressivity, a construct that has been primarily studied within the United States. Emotional expressivity is defined as the degree to which one displays one's feelings and thoughts to another. Underlying features of emotional expressivity (e.g., capacity to produce affective displays) facilitate higher levels of mental and bodily well-being (Leising, Müller, & Hahn, 2007). Overall, increased emotional expressivity has been linked to well-being and secure attachments; factors that protect against suicide (Kerr, Melley, Travea, & Pole, 2003). Consistent with the nature of emotional expressivity, histories of suicidal thoughts have been negatively associated with general emotional expressiveness in samples of American adults (Diggs & Lester, 1996).

Interestingly, new developments within the field of social psychology reveal significant cultural variation in how individuals express emotions and how emotional expressivity is related to positive and negative social outcomes. For example, individuals from collectivistic cultures, like Japan, learn to experience and express emotions as a relational process in order to maintain social harmony within primary in-group communities (Uchida, Townsend, Markus, & Bergsieker, 2009). This is in keeping with the position that collectivistic cultures adopt values that foster a high degree of in-group cohesion. Considering that high levels of emotional expressivity often include disclosing "individualistic" feelings (e.g., pride, frustration, envy) that may impinge upon group cohesion, some researchers suggest that Japanese adults prefer to restrain their emotional expressions (Mesquita & Karasawa, 2002). Violating norms that maintain social harmony

ACCEPTED MANUSCRIPT

may harm an individual's sense of belongingness, which, if diminished, can precipitate a desire to die (Joiner, 2005). As a result, inhibiting some emotional expressions in collectivistic cultures may act as a protective factor against future self-harm or suicide prone behaviors.

In summary, the purposes of the current study were to (a) determine if self-reports of the four disparate suicide proneness dimensions vary across culture and gender; (b) determine if there are culture and gender-specific differences in the associations among suicide acceptability, emotional expressivity, and suicide proneness; (c) and examine both culture and gender-specific models in predicting suicide proneness via suicide acceptability and emotional expressivity. In the current study, based on theories of culture and gender, we expected that Japanese and American men would report higher levels of all four suicide prone behaviors as compared to college women. Moreover, suicide acceptability and emotional expressivity are anticipated to be differentially related to suicide proneness for American versus Japanese college women and men. Also, we predicted that emotional expressivity would correlate with suicide proneness negatively for American college students, but positively for Japanese college students.

METHOD

Participants

In the American sample, 487 college students who were enrolled in Introductory Psychology classes at an urban Southeastern university were surveyed anonymously. To

facilitate comparisons across samples, all participants older than 25 years in both samples were dropped from future analyses as were five who neglected to report their gender.

Thus, the final sample comprised 417 American college students ($M = 20.6$ years). Most were women ($n = 283$; 67.9%) and 70% were Caucasian; 17% African American, 3% Hispanic, 4% Asian American, and 5% classified themselves as “other”.

In the Japanese sample, 404 respondents were recruited from classes taking place at two different universities: Kaetsu University ($n = 336$) and Tokai University ($n = 68$). Five participants were excluded from data analysis because of their ethnicity (i.e., they were Chinese and Cambodian), leaving a final pool of 396 Japanese participants with a mean age of 18.9 years. Of these, the majority were women ($n = 243$, 62.4%).

Measures

Life Attitudes Schedule – Short Form (LAS-SF; Lewinsohn, et al., 2004) consists of 24 true-false items that measure for health and illness, risk and injury, death and suicide, and self-related proneness. Total scores on the LAS-SF range from 0 to 24, with higher scores indicating a greater propensity to engage in life-threatening thoughts, actions, and behaviors. The LAS-SF has demonstrated solid internal consistency with college student samples from the United States ($\alpha = .78$, Lewinsohn et al., 2004). Moreover, the LAS-SF total and subscale scores have demonstrated excellent construct validity as evidenced by moderate associations with suicide attempts, depressive symptoms, and risky behaviors (Rohde, Seeley, Langhinrichsen-Rohling, & Rohling, 2003). In the current study, the

internal consistency in the U.S. sample was good ($\alpha = .82$), but slightly less than acceptable ($\alpha = .63$) in the Japanese sample.

Suicide Opinion Questionnaire (SOQ; Domino et al., 1988) acceptability subscale is comprised of 7 items that measure how much individuals view suicide as a natural means of escaping from stressful and/or difficult life situations. Items are measured on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Thus, total acceptability scores can range from 7 to 35; higher scores indicate that the person views suicide as an acceptable means of escaping overwhelming stressors. In American college students, SOQ acceptability has demonstrated solid test-retest reliability ($\alpha = .77$; Domino et al., 1988) and differentiated between non-suicide ideators and suicide ideators (McAuliffe et al., 2003). In the current study, acceptability had adequate internal consistency in the American sample ($\alpha = .71$), but weaker internal consistency in the Japanese sample ($\alpha = .65$).

Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994) is a 17-item measure designed to assess an individual's ability and propensity to outwardly display emotions. Respondents rate their agreement to each item on a 6-point Likert scale (never true = 1 to always true = 6). Higher scores reflect a greater propensity to express emotions effectively. Total scores range from 17 to 102. The EES was normed with a college student sample and had excellent internal consistency ($\alpha = .91$) and excellent construct validity with both positive emotions and social connectedness (Kring, Smith, &

Neale, 1994). The internal consistency coefficient was .91 for the American sample and .84 for the Japanese sample.

Procedure

Measures were administered in English to the American sample and in Japanese to the Japanese sample. All measures in Japanese were deemed equivalent to the English measures by using a back-translation method. This method required first translating each measure into Japanese. Next, a separate group of bilingual Japanese students ($n = 3$) translated the Japanese versions back into English. The two English versions were then compared until the meanings of each original item and its back-translated counterpart were judged to be equivalent by two of this study's authors. Both the original translations and the back translations were done by Japanese college students who had been living in the United States for more than two years and who spoke fluent English.

Ethical guidelines were followed in the collection of these data and IRB approval was obtained prior to data collection. Data were collected anonymously from consenting or assenting students. In the American sample, parental consent was obtained for all students under the age of 19, as this is the age of consent in the state where these data were collected. Measures were given in the same order to all participants. The survey took approximately 30-45 minutes to complete. At the end of the study, all participants were given a debriefing sheet, which explained the nature of the study. They were also given a list of local culture-specific mental health resources.

RESULTS

A two (culture) by two (gender) MANOVA on the four suicide proneness dimensions, suicide acceptability, and emotional expressivity yielded a significant main effect for culture (*Wilks' Lambda* (6, 777) = 104.11, $p < .001$, $\eta^2 = .45$) and gender (*Wilks' Lambda* (6, 777) = 20.29, $p < .001$, $\eta^2 = .14$). Also, there was a significant culture by gender interaction, (*Wilks' Lambda* (6, 777) = 6.18, $p < .001$, $\eta^2 = .05$).

ANOVA's revealed significant findings for each of the four suicide proneness subscales. Specifically, for culture, there were significant main effects for health and illness proneness, $F(1, 782) = 56.55$, $p < .01$, $\eta^2 = .07$; death and suicide proneness, $F(1, 782) = 261.65$, $p < .01$, $\eta^2 = .25$; and self-related proneness, $F(1, 782) = 435.57$, $p < .01$, $\eta^2 = .36$. As anticipated, Japanese students generally reported significantly more of these types of suicide prone behaviors than did American students. Surprisingly, rates of risk and injury proneness did not vary significantly across culture.

For gender, there were significant main effects on health and illness proneness, $F(1, 782) = 23.08$, $p < .01$, $\eta^2 = .03$; and injury and risk proneness, $F(1, 782) = 14.56$, $p < .01$, $\eta^2 = .02$. As predicted, across both cultures, college men reported engaging in more negative health and illness and risk and injury prone behaviors than did college women. Contrary to expectation, overall gender effects were not obtained for the other two components of suicide proneness.

Instead, significant culture by gender interactions occurred on injury and risk proneness, $F(1, 782) = 5.33, p < .01, \eta^2 = .01$ and on self-related proneness, $F(1, 782) = 23.53, p < .01, \eta^2 = .03$. An examination of the two subscale interaction effects revealed two different patterns. For injury and risk proneness, across both cultures, college men reported engaging in more risk and injury promoting behaviors than did college women. However, the gender differences on this subscale were significantly larger between American women and men than between Japanese women and men. In contrast, on self-related proneness, Japanese women were higher than Japanese men whereas the opposite pattern occurred among American students.

A two (culture) by two (gender) ANOVA on suicide acceptability revealed a main effect for culture, $F(1, 782) = 128.48, p < .001, \eta^2 = .14$; and a culture by gender interaction, $F(1, 782) = 6.10, p < .05, \eta^2 = .01$. The main effect for gender was not significant. See Table 1 for means and standard deviations. Japanese college students viewed suicide as more acceptable than American college students. However, there were no significant differences in suicide acceptability between Japanese women and men; in contrast, American men viewed suicide as significantly more acceptable than did American women.

In addition, a two (culture) by two (gender) ANOVA on emotional expressivity yielded a main effect for culture, $F(1, 782) = 10.98, p < .001, \eta^2 = .02$; a main effect for gender, F

(1, 803) = 74.82, $p < .001$, $\eta^2 = .09$; and a significant culture by gender interaction, $F(1, 803) = 18.15$, $p < .001$, $\eta^2 = .02$. Both groups of women reported significantly more emotional expressivity than men from their same culture, the gender difference accounted for 9% of the score variance. The emotional expressivity difference between American women and American men was significantly larger than between Japanese women and Japanese men.

As displayed in Table 2, bivariate correlations were then conducted in order to examine the inter-relationships among total suicide proneness, suicide acceptability, and emotional expressivity across each culture by gender subgroup. Most notably, suicide proneness was positively associated with suicide acceptability for all subgroups of college students. In contrast, suicide proneness was negatively associated with emotional expressivity for all subgroups except Japanese men.

As shown in Table 4, for American women and men, respectively, suicide acceptability and emotional expressiveness predicted 22% and 24% of the variance in suicide proneness, with both suicide acceptability ($b = .34$ for both genders, $p < .01$) and emotional expressiveness ($b = -.26$ and $-.29$ for women and men, $p < .01$) explaining unique variance. Alternatively, for Japanese women and men, respectively, suicide acceptability and emotional expressiveness predicted only 14% and 15% of the variance in suicide proneness, with only suicide acceptability ($b = .34$ and $.39$, $p < .01$) explaining unique variance.

DISCUSSION

The obtained results revealed significant differences in the expression of suicide proneness across cultures and genders. Specifically, Japanese college students self-reported more health and illness, death and suicide, and self-related suicide proneness compared to American college students. These results are consistent with numerous epidemiological findings (Center for Disease Control and Prevention, 2007; Statistics and Information Department, Ministry of Health, Labor, and Welfare, 2009) that suggest Japanese young adults are at a higher risk for suicide compared to American young adults. However, this study extends those findings by considering culture by gender interactions in the four self-reported domains of suicide proneness. Most notably, two culture by gender interaction effects on the suicide proneness measure are worth highlighting.

First, American college men reported particularly high levels of engagement in injury and risk suicide prone behaviors, resulting in a larger gender difference on the risk and injury subscale in the American as opposed to the Japanese sample. This is surprising as most suicide markers (e.g., suicide gestures and behaviors) have been found to be more prevalent in Japanese as compared to American samples of young adults. However, there are several plausible reasons for the obtained findings. First, there may be some cultural variation in risk and injury prone behaviors. For instance, recent trends in Japanese travel patterns suggest that an increasing amount of youth living in Tokyo chose to remain car-

free (Kageyama, 2009). As such, risk and injury prone LAS-SF items such as “driving 20 mph over the speed limit” may not be a suitable reflection of risk and injury prone behaviors in Japanese youth. Alternatively, many might interpret these behaviors (e.g., thrill seeking and risk-taking) as culturally normative for American college men. If this is the case, more emphasis should be placed on clinical interventions that target thrill seeking and risk-taking behaviors in young American men as high levels of these behaviors may signal suicide proneness.

In contrast, relatively high rates of self-related suicide proneness were reported by Japanese college women on the LAS-SF. This finding was somewhat surprising as traditionally young men report higher scores on all four LAS-SF subscales when compared to young women (Langhinrichsen-Rohling et al., 1998; Lewinsohn et al., 2004). However, gender role conflicts within the shifting cultural climate of Japan may account for higher reports of self-related suicide prone behaviors (e.g., self-depreciating thoughts) in Japanese women. Historically, gender role expectations have placed Japanese women in the role of homemaker, such that their primary responsibilities included housework, child-rearing, and caring for the elderly (Fujimoto, 2005). With the onset of democracy and the economic recession of the 1980’s, Japanese women have an increasing presence in the workforce (Sagara, Ito, & Ikeda, 2006). However, Japan still has a distinct gender-based hierarchy within the home and work world. As a consequence, there may not have been a reduction in home-related stressors and expectations that could compensate for Japanese women’s increased job-related

ACCEPTED MANUSCRIPT

pressures; this would, in effect, leave Japanese women struggling with multiple role overload (Fujimoto, 2005). Future work focusing on the impact of gender-role expectations and work/school/family related stress on self-deprecating thoughts associated with suicide in Japanese women is warranted.

Analyses also revealed culture-specific differences in students' self-reported attitudes promoting suicide acceptability. Overall, Japanese students reported higher levels of accepting suicide as a natural means of ending one's life than did American students. These findings are consistent with Domino and Takahashi's (1991) results which indicate that there are cultural differences in how Japanese and Americans students view suicide. Additionally, these findings support Okajima's (2005) claim that underlying components of "suicide of resolve" are still prevalent among today's Japanese youth. Taken as a whole, it is important that mental health workers at Japanese universities develop and implement culturally appropriate prevention strategies to reduce the rate in which Japanese students view suicide as a feasible means of escaping one's life stressors.

Surprisingly, the degree to which cultural differences emerged on self-reported levels of emotional expressivity was small ($\eta^2 = .01$). These results fail to support prevailing cultural theories that postulate large differences in emotionally expressive traits between American and Japanese college students (Gibney, 1985). Instead, these findings indicate greater similarity in expressed emotionality between college students from the two countries than was anticipated. However, consistent with gender-related norms, in both

ACCEPTED MANUSCRIPT

cultures, college women self-reported greater emotional expressivity than college men.

These findings are consistent with numerous studies demonstrating that women are socialized from an early age to be more interested in emotions than men; women may consequently establish more diverse and complex ways of expressing their emotionality (e.g., Hess et al., 2000).

Univariate associations were also examined to determine the relationships among total suicide proneness, suicide acceptability, and emotional expressivity for American and Japanese women and men. As predicted, suicide acceptability was related to significantly greater reports of suicide proneness for college women and men from both cultures. In addition, consistent with expectations, higher levels of emotional expressivity were related to lower levels of total suicide proneness for American women and men.

However, surprising and unique relationships were revealed for Japanese women and men. Specifically, results detected a small negative relationship between emotional expressivity and suicide proneness for Japanese women and an insignificant relationship between these variables for Japanese men. These findings were not in keeping with the hypothesis that emotional expressivity would be positively related to suicide proneness for Japanese women and men. One possible explanation for the obtained results might be that different types of emotional expressions (ones that promote social harmony vs. ones that disrupt social harmony) are differentially related to negative mental health outcomes in Japanese college students. More research is warranted to determine how various

ACCEPTED MANUSCRIPT

aspects of emotional expressivity affect suicide prone behaviors of Japanese women and men.

In total, four independent enter method regression models were constructed to predict suicide proneness scores for Japanese and American women and men. For Japanese students of both genders, only suicide acceptability was retained as a significant predictor of suicide proneness for women (14% of the variance explained) and men (15% of the variance explained). While the current study was the first to demonstrate significant relationships between suicide acceptability and suicide proneness in Japanese college students, these results are consistent with longstanding theories intimating that positive suicide attitudes are a vulnerability factor for future suicide behaviors (Sakamoto et al., 2006). However, these results were obtained via a cross-sectional design. Thus, longitudinal designs to evaluate the stability of these relationships across time will be essential.

These findings have clinical implications; especially considering the current lack of effective, university endorsed prevention programs for suicide prevention in Japan (Kawase et al., 2008; Leenaars et al., 2001). Culturally appropriate prevention efforts targeting the promotion of well-being and community preventive care may be an important initial step in confronting the steadily rising rates of suicide among Japanese college students (Iwasaki, 2005). In particular, it may be useful to design educational experiences concerning “mind-body-spirit” wellness connections to promote social

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

harmony and hope for the future for all Japanese students. In part, such programs may bolster a sense of belongingness within one's primary in-group and help extinguish the perceptions of approval, glamor, and legitimacy associated with the Japanese phenomena of "suicide of resolve."

Unexpectedly, emotional expressivity was not retained as a significant independent predictor of suicide proneness for Japanese women or men. The lack of obtained findings may relate to the employed measure of emotional expressivity. Recent studies have shown that specific types of emotional expression (e.g., indebtedness, friendliness) often enhance social harmony and may be culturally acceptable in Japan. In contrast, other types of emotional expressions (e.g., pride, anger) detract from social harmony and may thus be culturally taboo (Safdar, et al., 2009). Unfortunately, the measure of emotional expressivity utilized in this study did not delineate among different types of emotional expressions. Moreover, considering that the Emotional Expressivity Scale was normed with an American sample of college students, it could be that adaptational features of emotional expressivity for Japanese young adults were not well-captured within the measure's framework. Further cross-cultural research in this area is needed.

With regards to American college women and men, both attitudes that promote suicide acceptability and emotional expressivity were retained as significant independent predictors of self-reported suicide proneness. There were no gender differences within these models as the combination of suicide acceptability and emotional expressivity

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

predicted similar amounts of variance in suicide proneness for American women (22%) and men (24%). In terms of attitudes that promote suicide acceptability, these results support Gibb, Andover, and Beach's (2006) findings, which suggest that permissive attitudes towards suicide act as a risk factor for future expressions of suicidal behavior. Future research could examine the moderator and mediator effects of permissive attitudes in understanding the relationships between other well-studied risk factors (e.g., daily hassles, depression, and hopelessness) and suicide proneness.

For American college students, these results highlight the importance of accessing and appropriately expressing emotions to others and creating and maintaining social relationships based on deep emotional connections. These activities may serve to reduce the likelihood of engaging in suicide prone behaviors. In particular, the expression of particular types of emotions (e.g., joy, sadness) promotes intimacy and stable social support networks in adults. In keeping with this position, it is plausible that American young adults who suppress emotions or express them in inappropriate ways are likely to be less able to cultivate and maintain longstanding and stable interpersonal relationships. This inability, in turn, may precipitate more negative emotional outcomes such as suicide ideation and attempts. As a result, it is important that future researchers examine the interaction between emotional expressivity and social support and/or perceptions of belongingness (Joiner, 2005) in order to obtain a deeper understanding of the choice to engage in suicide prone behaviors in American college students.

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

However, several limitations to the current study should be noted. First, the American college students were obtained from one university located in the Southern United States. The extent to which these findings generalize to students in other geographic locations remains to be determined. Likewise, the Japanese respondents came from two universities; both were located near Tokyo which may also limit generalizability. Also reliability analyses for the LAS-SF ($\alpha = .63$) and SOQ ($\alpha = .65$) revealed lower than desirable internal consistency scores for the Japanese sample. It is likely that lower internal consistency scores were a byproduct of the back-translation process such that variation occurred within the degree to which the items functioned similarly across the two cultures. Lower internal consistency coefficients for the Japanese sample could also reflect variation in the degree to which the constructs of suicide proneness, suicide attitudes, and emotional expressivity are perceived similarly in Japanese versus American cultures; psychometric studies of the translated measures will be important future steps. Finally, this research used a cross-sectional design. Longitudinal research with large representative samples will be needed to consider the degree to which suicide acceptability and emotional expressivity predicts engagement in actual suicidal behaviors. Nonetheless, the current findings highlight some of the understudied risk factors that may enhance the utility in ongoing suicide prevention and intervention efforts occurring in both countries. Moreover, these findings highlight the importance of considering both the culture and the gender of the potentially suicidal person in the development of a useful prevention strategy or well-designed intervention plan.

ACCEPTED MANUSCRIPT

REFERENCES

- Center for Disease Control and Prevention (CDC). (2007). Suicide trends among youths and young adults aged 10–24 years – United States, 1990–2004. *Morbidity and Mortality Weekly Report*, *56*, 905–908.
- De Munck, S., Portzky, G., & Van Heeringen, K. (2009). Epidemiological trends in attempted suicide in adolescents and young adults between 1996 and 2004. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *30*(3), 115-119.
- Diggs, K., & Lester, D. (1996). Emotional control, depression and suicidality. *Psychological Reports*, *79*, 774.
- Domino, G., MacGregor, J. C., & Hannah, M. T. (1988). Collegiate attitudes toward suicide: New Zealand and United States. *Omega: Journal of Death and Dying*, *19*(4), 351-364.
- Domino, G., & Takahashi, Y. (1991). Attitudes toward suicide in Japanese and American medical students. *Suicide and Life-Threatening Behavior*, *21*(4), 345-359.
- Fujimoto, K. (2005). From women's college to work: Inter-organizational networks in the Japanese female labor market. *Social Science Research*, *34*(4), 651-681.
- Gibb, B. E., Andover, M. S., & Beach, S. H. (2006). Suicidal ideation and attitudes toward suicide. *Suicide and Life-Threatening Behavior*, *36*(1), 12-18.
- Gibney, F. (1985). *Japan, the fragile superpower*. New York: New American Library.
- Hess, U., Senécal, S., Kirouac, G., Herrera, P., Philippot, P., & Kleck, R. E. (2000). Emotional expressivity in men and women: Stereotypes and self-perceptions. *Cognition and Emotion*, *14*(5), 609-642.

ACCEPTED MANUSCRIPT

Iwasaki, M. (2005). Mental Health and Counseling in Japan: A path toward societal transformation. *Journal of Mental Health Counseling*, 27, 129-141.

Kageyama, Y. (2009). In Japan, that's how a generation rolls. Retrieved on August 12, 2011 from

<http://www.oregonlive.com/business/oregonian/index.ssf?/base/business/123121951587500.xml&coll=7>

Kawase, E., Hashimoto, K., Sakamoto, H., Ino, H., Katsuki, N., Iida, Y., & ... Sasaki, T. (2008). Variables associated with the need for support in mental health check-up of new undergraduate students. *Psychiatry and Clinical Neurosciences*, 62(1), 98-102.

Kerr, S. L., Melley, A. M., Travea, L., & Pole, M. (2003). The relationship of emotional expression and experience to adult attachment style. *Individual Differences Research*, 1(2), 108-123.

Kitanaka, J. (2008). Diagnosing suicides of resolve: Psychiatric practice in contemporary Japan. *Culture, Medicine and Psychiatry*, 32(2), 152-176.

Kring, A. M., Smith, D. A., & Neale, J. M. (1994). Individual differences in dispositional expressiveness: Development and validation of the Emotional Expressivity Scale. *Journal of Personality and Social Psychology*, 66(5), 934-949.

Lamis, D., Saito, M., Klibert, J., Malone, P.S., Langhinrichsen-Rohling, J. (In submission). Hopelessness and suicide proneness in U.S. and Japanese college students: Depressive symptoms as a potential mediator.

Langhinrichsen-Rohling, J., Friend, J., & Powell, A. (2009). Adolescent suicide, gender,

ACCEPTED MANUSCRIPT

and culture: A rate and risk factor analysis. *Aggression and Violent Behavior*, 14(5), 402-414.

Langhinrichsen-Rohling, J., & Lamis, D. A. (2008). Current suicide proneness and past suicidal behavior in adjudicated adolescents. *Suicide and Life-Threatening Behavior*, 38(4), 415-426.

Langhinrichsen-Rohling, J., Sanders, A., Crane, M., & Monson, C. M. (1998). Gender and history of suicidality: Are these factors related to U.S. college students' current suicidal thoughts, feelings, and actions? *Suicide and Life-Threatening Behavior*, 28, 127-142.

Leenaars, A., Wenckstern, S., Appleby, M., Fiske, H., Grad, O., Kalafat, J., & ... Takahashi, Y. (2001). Current issues in dealing with suicide prevention in schools: Perspectives from some countries. *Journal of Educational & Psychological Consultation*, 12(4), 365-384.

Leising, D., Müller, J., & Hahn, C. (2007). An adjective list for assessing emotional expressivity in psychotherapy research. *Clinical Psychology & Psychotherapy*, 14(5), 377-385.

Lewinsohn, P. M., Langhinrichsen-Rohling, J., Rohde, P., & Langford, R. A. (2004). *Life Attitudes Schedule: A risk assessment for suicidal and life-threatening behaviors (LAS) technical manual*. North Tonawanda, NY: Multi-Health Systems.

McAuliffe, C., Corcoran, P., Keeley, H. S., & Perry, I. J. (2003). Risk of suicide ideation associated with problem-solving ability and attitudes toward suicidal behavior in

university students. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 24(4), 160-167.

Mesquita, B., & Karasawa, M. (2002). Different emotional lives. *Cognition and Emotion*, 16(1), 127-141.

National Adolescent Health Information Center (2006). 2006 Fact Sheet on Suicide: Adolescents & Young Adults. Retrieved on August 12, 2011 from <http://nahic.ucsf.edu/downloads/Suicide.pdf>

Okajima, Y. (2005). What can psychiatrists do for patients who want to die? *Psychiatria et Neurologia Japonica*, 107, 936-946.

Rohde, P., Seeley, J. R., Langhinrichsen-Rohling, J., & Rohling, M. L. (2003). The Life Attitudes Schedule-Short Form: Psychometric properties and correlates of adolescent suicide proneness. *Suicide and Life-Threatening Behavior*, 33(3), 249-260.

Safdar, S., Friedlmeier, W., Matsumoto, D., Yoo, S., Kwantes, C. T., Kakai, H., & Shigemasu, E. (2009). Variations of emotional display rules within and across cultures: A comparison between Canada, USA, and Japan. *Canadian Journal of Behavioural Science*, 41, 1-10.

Sagara, J., Ito, Y., & Ikeda, M. (2006). Gender-role attitude and psychological well-being of middle-aged men: Focusing on employment patterns of their wives. *Japanese Psychological Research*, 48(1), 17-26.

Sakamoto, S., Tanaka, E., Neichi, K., Sato, K., & Ono, Y. (2006). Sociopsychological factors relating to suicide prevention in a Japanese rural community: Coping behaviors

ACCEPTED MANUSCRIPT

and attitudes toward depression and suicidal ideation. *Psychiatry and Clinical Neurosciences*, 60(6), 676-686.

Statistics and Information Department, Ministry of Health, Labor, and Welfare (2009).

Vital Statistics 2009. Retrieved on August 12, 2011 from

<http://www.mhlw.go.jp/english/database/db-hh/xls/1-28.xls>

Uchida, Y., Townsend, S. M., Markus, H., & Bergsieker, H. B. (2009). Emotions as within or between people? Cultural variation in lay theories of emotion expression and inference. *Personality and Social Psychology Bulletin*, 35(11), 1427-1439.

Young, J. (2002). Morals, suicide, and psychiatry: A view from Japan. *Bioethics*, 16(5), 412-424.

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

Table 1 Interactions between Culture and Gender on Suicide Proneness, Acceptability, and Emotional Expressivity

| | Japanese Students | | American Students | | | | |
|--------------------|-------------------|-----------|-------------------|-----------|----------|----------|----------|
| | (n = 390) | | (n = 415) | | | | |
| | Women | Men | Women | Men | | | |
| Measures | (n = 243) | (n = 147) | (n = 281) | (n = 134) | <i>F</i> | <i>p</i> | η^2 |
| Health and Illness | | | | | | | |
| Proneness | | | | | 0.02 | .882 | .00 |
| | <i>M</i> | 2.28 | 2.80 | 1.46 | 2.00 | | |
| | <i>SD</i> | 1.37 | 1.52 | 1.37 | 1.59 | | |
| Injury and Risk | | | | | | | |
| Proneness | | | | | 5.69 | .017 | .00 |
| | <i>M</i> | 2.04 | 2.20 | 1.86 | 2.51 | | |
| | <i>SD</i> | 1.37 | 1.25 | 1.45 | 1.36 | | |
| Death and Suicide | | | | | | | |
| Proneness | | | | | 3.62 | .057 | .00 |
| | <i>M</i> | 1.58 | 1.53 | 0.26 | 0.48 | | |

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

| | | | | | | | |
|-----------------------------|-----------|-------|-------|-------|-------|------|-----|
| | <i>SD</i> | 1.27 | 1.57 | 0.62 | 0.95 | | |
| Self-Related | | | | | | | |
| Proneness | | | | | 25.01 | .000 | .03 |
| | <i>M</i> | 3.19 | 2.54 | 0.66 | 0.98 | | |
| | <i>SD</i> | 1.58 | 1.44 | 1.02 | 1.12 | | |
| Acceptability of Suicide | | | | | 5.52 | .020 | .01 |
| | <i>M</i> | 20.29 | 20.25 | 16.59 | 17.42 | | |
| | <i>SD</i> | 3.81 | 4.30 | 4.08 | 4.66 | | |
| Emotional Expressivity | | | | | 19.69 | .000 | .03 |
| | <i>M</i> | 62.84 | 58.56 | 69.93 | 57.75 | | |
| | <i>SD</i> | 11.70 | 11.22 | 13.26 | 13.59 | | |

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

Table 2 Correlations among Suicide Proneness, Acceptability, and Emotional Expressivity in Women versus Men American and Japanese College Students

| Variables | 1 | 2 | 3 |
|------------------------------|------------------|-------------------------|--------------------------|
| 1. Suicide Proneness | — | .38** (.36**) | -.31** (-.15*) |
| 2. Attitude of Acceptability | .40** (.38**) | — | -.16* (-.17**) |
| 3. Emotional Expression | -.37** (-.06) | -.19* (-.23**) | — |

Note: * Correlation is significant at the .05 level.

** Correlation is significant at the .01 level

Correlations in bold and above the diagonal represent relationships for College Women.

Correlations in parentheses represent relationships for Japanese students.

ACCEPTED MANUSCRIPT

Table 3 Multiple Regressions on Suicide Proneness for American and Japanese College Women and Men

| Variables | Beta | β | SE β | t-value | F | R ² |
|------------------------------------|------------------------|---------|------------|---------|-------|----------------|
| American Women – Suicide Proneness | | | | | 37.41 | .22** |
| | Acceptability | .34** | .28 | .04 | 6.34 | |
| | Emotional Expressivity | -.26** | -.06 | .01 | -4.84 | |
| American Men – Suicide Proneness | | | | | 20.11 | .24** |
| | Acceptability | .34** | .26 | .06 | 4.38 | |
| | Emotional Expressivity | -.29** | -.07 | .02 | -3.67 | |
| Japanese Women – Suicide | | | | | 18.62 | .14** |

ACCEPTED MANUSCRIPT

ACCEPTED MANUSCRIPT

| | | | | | | |
|---|---------------------------|-------|------|-----|-------|-------|
| Proneness | | | | | | |
| | Acceptability | .34** | .34 | .06 | 5.50 | |
| | Emotional Expressivity | -.11 | -.04 | .02 | -1.73 | |
| Japanese Men – Suicide Proneness | | | | | 12.48 | .15** |
| | Acceptability | .39** | .31 | .07 | 4.90 | |
| | Emotional Expressivity | .03 | .01 | .03 | .34 | |

Note: * Significant at the .05 level

** Significant at the .01 level