8-13-2016

Cultural Diversity and the Impact of Acculturation and Personal Experience on Perceptions of Suicide

Susan Breidenich
Western Kentucky University, susan.breidenich339@topper.wku.edu

CULTURAL DIVERSITY AND THE IMPACT OF ACCULTURATION AND PERSONAL EXPERIENCE ON PERCEPTIONS OF SUICIDE

A Capstone Experience/Thesis Project

Presented in Partial Fulfillment of the Requirements for

the Degree Bachelor of Science with

Honors College Graduate Distinction at Western Kentucky University

By:

Susan D. Breidenich

*****

Western Kentucky University
2016

CE/T Committee:

Dr. Stephen O'Connor, Advisor

Dr. Anthony Paquin

Siera Bramschreiber

Approved by

_____
Advisor
Department of Psychological Sciences

ABSTRACT

Many factors influence cross-cultural differences in suicide rates and behaviors. One potential explanation is that attitudes and values influence the way individuals perceive suicide. In addition, previous literature indicates that attitudes can change in response to individual experiences. Further research on cultural attitudes toward suicide and individual experiences that influence them could inform prevention and treatment efforts targeted toward multicultural populations. The aim of this study is to examine the impact of culture, acculturation, and personal experience (i.e., exposure to suicidal behavior through close relationship) on suicide attitudes. The hypotheses were (1) that significant differences in attitudes towards suicide will be observed between US and international students and (2) acculturation and experience knowing someone who has died by or attempted suicide will impact suicide attitudes in international students. Regression analyses indicated that there were significant differences between US and International students' suicide attitudes. Moderation analyses indicated that more acculturated international students had more tolerant attitudes than less acculturated students and international students who had personal experience demonstrated more agreement with fictional suicide attempts.

Keywords: suicide, cultural attitudes, acculturation, personal experience

Dedicated to my family and friends for their unconditional love and support.

ACKNOWLEDGEMENTS

This project would not have been possible without the expertise of many individuals. I would like to thank my thesis chair, Dr. Stephen O'Connor, for his guidance over the past 18 months. I would also like to thank my committee members – Dr. Anthony Paquin and Siera Bramschreiber – for their support and insight, as well as the International Student Office at WKU for their valuable role in helping me recruit participants, and Dr. Qin Zhao for her role in making the assessment battery culturally appropriate.

The Honors College has played a critical role in my development over the past four years by providing financial support for this project and other international experiences, as well as an environment which challenged me to grow in ways I never could have imagined. I am also thankful for the FUSE grant which provided funds to purchase research materials and cover travel expenses to the 49th American Association of Suicidology Conference in Chicago in 2016.

Finally, I would like to thank my family and friends for their support and encouragement to complete this project.

VITA

November 6, 1993 ……Born
Edgewood, Kentucky

2012……...Villa Madonna Academy
Villa Hills, Kentucky

2014 ……...Study Abroad Participant
Harlaxton College
Grantham, United Kingdom

2014……Suicide Prevention Lab
Western Kentucky University

2015……...Faculty-Undergraduate
Student Engagement (FUSE)
Grant recipient

2015 ……...Study Abroad Participant
Amsterdam, the Netherlands

2016……...Poster Presentation
49th American Association of
Suicidology Conference
Chicago, IL

2016……...Bachelor of Science Degree
Western Kentucky University

FIELDS OF STUDY

Major Field: Psychological Science, Clinical Concentration

Minor Field: Sociology

TABLE OF CONTENTS

LIST OF FIGURES

Cultural Diversity and the Impact of Acculturation and Personal Experience on Perceptions of Suicide

Suicide is the tenth leading cause of death in the United States, and the second in youth ages 15 to 24, after accidents (American Association of Suicidology, 2015). Suicide is an international problem as well. According to the World Health Organization (WHO, 2015a), over 800,000 people die by suicide every year, and many more attempt. It is also the second leading cause of death among 15 to 29 year-olds worldwide.

Though suicide is a widespread, international problem, rates and behaviors vary across cultures. Guyana has the highest rate of suicide at 44.2 per 100,000 people per year, closely followed by Lithuania and South Korea. Countries with the lowest reported rates include Saudi Arabia and Syria, both at 0.4 suicide deaths per 100,000 people per year (WHO, 2015b).

Different countries, and even regions within countries, use different methods. Ajdacic-Gross et al. (2008) investigated the differences in methods between world regions to determine the urgency and feasibility of means restriction. They found that pesticide poisoning was the most common method for suicide in Asian and Latin American countries, while poisoning by drugs was most common in the United Kingdom and Nordic countries. In the United States, firearms were most common, while hanging

as most common in Eastern Europe. Ajdacic-Gross and colleagues determined that common methods were partially determined by the availability of means in various world regions. However, there may be other, underlying cultural factors at play in the difference in suicide rates and behaviors.

Suicide Attitudes: Influence on Rates and Behaviors

One factor that may be influence suicide rates and behaviors are the cultural attitudes about suicide. Tseng applied his model of the influence of culture on psychopathology to the influence of culture on suicidal behavior (in Colucci, Lester, Hjelmeland, & Park 2013). Cultural attitudes about suicide (e.g., the stigma of suicidal behavior; predispositions of health professions) fall under the category "Pathoreactive Effects." Attitudes and stigma about suicide could influence rates and suicidal behavior at multiple, different levels, such as an entire nation's suicide rates, whether nations underreport/misrepresent suicide, prevention efforts, help-seeking behaviors of an individual, or reactions to suicide. Therefore, the study of cultural attitudes toward suicide is important for prevention and treatment strategies.

Pro-suicide, or tolerant, attitudes tend to be positively related with suicide risk (Colucci & Martin, 2007; Zhang & Jia, 2009-2010). For example, Japanese culture is permissive of suicide in some cases. In his review of Japanese culture, psychiatry and suicide, Young (2002) noted that Japanese society has traditionally viewed suicide as a positive, rational, even virtuous act if done to help one's family. Japan has a very high rate of suicide, and some have speculated that the nation's tolerant view is a factor. Many suicides in Japan are preceded by a physical illness and it is possible that with Japan's

tolerant attitudes, suicide may seem like a preferable option to avoid being a burden to their families (Colucci et al., 2013, p. 50-51; Young, 2002).

If more tolerant attitudes toward suicide are related to higher suicide risk, the reverse could be true as well – highly stigmatized attitudes about suicide could be related to lower rates. For example, suicide is stigmatized and even illegal in many Muslim and African nations. Kamal and Lowenthal (2002) investigated the impact of religion on reasons for living and self-reported suicidal behavior in a sample of 100 non-clinical Hindu and Muslim participants in the United Kingdom. While suicide is strictly forbidden in Islam, Hindu religion is more ambivalent towards it. Kamal and Lowenthal wanted to know if religious-cultural traditions had any impact on suicide risk and reasons for living. Though there were no significant differences between Hindus and Muslims in self-reported suicide ideation and attempts, Muslims endorsed moral and religious reasons for living more often than Hindus, indicating that they were opposed to suicide for moral reasons more often than Hindus. Lester (2006) reviewed the literature on suicidal behavior in Muslim nations and concluded that rates do appear to be lower in Muslim nations than in other nations. He also reviewed the reasons behind these low rates and found that in addition to socio-economic factors, cultural values also may play a role in the low rates. However, Lester also noted that because suicide is strictly forbidden by Islam and even illegal in many Muslim nations, there is a possibility incidences of suicidal behavior are covered up or misreported.

African nations also tend to have negative attitudes toward suicide. Lester and Akande (1994) compared the suicide attitudes of 203 Yuroba university students in Nigeria with 114 American students in the United States. Attitudes were measured using

the Suicide Opinion Questionnaire (SOQ). Nigerian students demonstrated more negative attitudes than American students; specifically, that suicide is an angry act. Interestingly enough, the Yuroba are a predominately Muslim group. As stated above, suicide is strictly forbidden and highly stigmatized in Islam.

Osafo, Hjelmeland, Akotia, and Knizek (2011) conducted a qualitative study of suicide attitudes in 15 Ghanaian psychology students and the meaning they ascribed to suicide. Through in-depth interviews, researchers found that overall students viewed suicide as a serious sin against God and the family and community and that it was an abnormal and selfish act.

Hjelmeland et al.(2008) compared the attitudes of Ugandan, Ghanaian, and Norwegian psychology students. Based on previous research, the authors claimed that suicide is highly stigmatized in Uganda and Ghana, though there is little official data on incidences of suicidal behavior. Norway was chosen as a comparison to these two nations as there is official data and a national prevention effort underway. Researchers wanted to investigate the levels of stigma and education about suicide in these countries and their relation to suicide attitudes. Overall, the attitudes of Ugandan and Ghanaian students were more negative than Norwegian students' attitudes. Ugandan and Ghanaian students were more likely to agree with the statements that suicide cannot be justified and is an act of revenge/punishment. Norwegian students were more likely to agree with the statements that suicide is a right and a cry for help. In addition to principle attitudes about suicide, the authors also investigated the taboo surrounding suicide and myths about it (i.e., measuring knowledge or lack thereof) in these three countries. In Ghana and Norway, significant negative correlations were found between the taboo and knowledge

variables. Interestingly enough, Norwegian students were more often undecided on the knowledge/myths variable than their African counterparts, indicating that they were less willing to take a strong, decisive stance on statements about suicide.

Not only do suicide attitudes, behaviors, and rates vary between nations, but nations themselves are multi-cultural. Within any dominant culture of a nation or region, there are also sub-cultures which may have different suicide rates and behaviors than the dominant culture. Attitudes about suicide may vary between these sub-cultures as well. Range et al. (1999) conducted a review of the cultural considerations of suicide, including cultural attitudes, among Asian Americans, African Americans, Latinos, and Native Americans and concluded there is a need for more culturally sensitive treatments and clinicians. They found there is great variation in the cultural contexts and rates of suicide between these four groups and the dominant, White American culture. For example, African American suicide rates have traditionally been lower than white Americans. African American attitudes about suicide are generally more condemnatory compared to white Americans, as suicide goes against African American culture (Early and Akers, 1993; Range et al., 1999).

Colucci and Martin (2007) reviewed 82 publications on cross-cultural and ethnic considerations of youth suicide, including risk factors and cultural attitudes toward suicide. They found that young Americans demonstrated more tolerant, accepting suicide attitudes than Ghanaians, New Zealander, Nigerian, and Mexican American youth, though less tolerant than Canadian and Japanese youth.

Do Attitudes Change?

There are many factors that can influence prevailing attitudes toward suicide, including religious/spiritual background, norms, values, cultural orientation (e.g. collectivism or individualism), and overall attitudes about mental health (e.g., emphasis on biological causes). At the individual level, personal experiences and events can also shape attitudes and add another layer to the equation. The present study focuses specifically on acculturation and personal exposure to suicidal behavior.

Attitudes are important because they influence behavior. In this context, attitudes could influence the decision to seek treatment when experiencing suicidal thoughts. It is important to study cultural attitudes of suicide, but if attitudes change, it is also important to know what changes them and how in order to improve prevention and intervention strategies.

Acculturation. Acculturation occurs when a group or individual from a minority culture is exposed to a dominant culture and adopts particular aspects from that dominant culture (Eshun, 2006; Lester, 2007). Acculturation can occur on behavioral or psychological levels. Behavioral acculturation occurs when immigrants adopt observable behaviors from the dominant culture. Psychological acculturation occurs when they adopt non-observable aspects of the dominant culture, such as beliefs, norms, values, and/or attitudes. As noted above, traditional Japanese society views suicide as honorable in some cases, even rational. However, Japanese psychiatrists and lawmakers are adopting the Westernized view of suicide as an irrational act which is the result of mental illness (Range et al., 2002). This may be an example of psychological acculturation.

Eshun (2006) investigated the relationship between three measures of acculturation (i.e., psychological, behavioral, and length of residency in the US) and suicide attitudes in 81 Ghanaian immigrants to the United States. As noted above, Ghanaians traditionally have strong negative attitudes about suicide. However, results indicated positive relationship between both psychological acculturation and tolerant suicide attitudes and length of residency in the United States and tolerant suicide attitudes. In other words, immigrants who were more psychologically acculturated or had lived in the US longer demonstrated less negative suicide attitudes. However, there was no significant relationship between behavioral acculturation and suicide attitudes. This study adds to the evidence that there is a relationship between the acculturation process and a change in suicide attitudes, though there was no comparison group of US-born subjects.

Personal Experience. Exposure to suicidal behavior through a family member or close friend is increases risk for suicide (Colucci et al., 2013; Colucci & Martin, 2007). Do attitudes change because of a personal connection to knowing someone with suicidal behaviors? Because personally knowing someone is a risk factor, it is important to know if attitudes change in response to this exposure, because attitudes could influence help-seeking behaviors if someone is experiencing suicidal thoughts.

Research in this area is limited. In Osafo and colleagues' (2011) qualitative study, there is an example of a Ghanaian student who felt more sympathetic towards suicidal individuals compared to other subjects because she had previously attempted suicide herself. However, the question as to whether experiencing suicide indirectly through a

family member or close friend strengthens or reinforces negative attitudes or makes people more tolerant remains largely unanswered.

Hjelmeland and colleagues (2008) also researched the influence of exposure to suicide, whether personally or through a close relationship, in their study on Ghanaian, Ugandan, and Norwegian attitudes about suicide. In Ghana, people were more likely to believe people had a right to take their own lives if they had a suicide death in the family, a previous attempt themselves, and/or more life-weariness. Ghanaians were also less likely to believe suicide could be prevented if they had a previous death by suicide in the family. However, if they had previous life weariness/death wishes, people were more likely to believe suicide were cries for help and acts of revenge/punishment. In Uganda, people were more likely to believe suicide was a right if they had life weariness/death wishes within the last year. In Norway, people were more likely to believe suicide was a right and an act of revenge/punishment if they experienced someone outside of the family with suicidal behavior or had more life weariness.

On the other hand, Zhang and Jia (2009-2010) investigated the effect of a suicide of a family member in Chinese subjects using 66 cases of a death by suicide and 66 matched controls. They found that death by suicide of a family member did not appear to have a significant impact on family members' attitudes toward suicide, which conflicts with the findings of Hjelmeland and colleagues (2008). However, Zhang and Jia noted there were methodological considerations in their study and there may be other factors influencing suicide attitudes.

Importance of Studying Suicide Attitudes

Attitudes often precede and influence behavior, so an understanding of cultural attitudes toward suicide may lead to a better understanding of the meanings of suicidal behavior in different cultures and the decision to seek treatment (Colucci et al., 2013; Goldston et al., 2008; Hjelmeland et al., 2008; Range et al.; 1999). International students are a growing population in American universities and may be experiencing acculturative stress, which is a risk factor for suicide (Goldston et al, 2008; Range et al., 1999; Shadick & Akhter, 2014). Stigma associated with mental illness is one of the main factors preventing students from seeking mental health services. This in turn leads to poor outcomes such as increased suicidal ideation (Shadick & Akhter, 2014). If suicide is highly stigmatized in an international student's native culture and attitudes about suicide are static, the student may be less likely to seek help if he or she is experiencing suicidal thoughts. With that being said, students who come from a culture with a tolerant attitude towards suicide and an emphasis on saving face, such as Japan, suicide may seem like a preferable option over seeking help (Range et al., 1999). Culturally diverse students may have different perspectives on mental health and help-seeking behaviors. Therefore, a different approach to prevention and treatment is necessary (Goldston et al., 2008; Range et al, 1999; Shadick & Akhter, 2014).

In order to determine the right approach, mental health professionals should understand cultural attitudes and what influences them. In addition, attitudes can influence people's willingness to help others who are experiencing suicidal thoughts as well as treatment content and efficacy (Hjelmeland et al., 2008; Osafo et al., 2011). With

the growing cultural diversity within the United States, having culturally-sensitive mental health prevention and treatment strategies is important.

The Present Study

The purpose of this study was to examine attitudes of suicide in international and US-born college students, and how acculturation and personal experience (exposure) may influence those attitudes. The research questions we posed were "are international students' suicide attitudes different than those of US students" and "do international students' attitudes become more similar to mainstream attitudes in response to exposure to a different culture or suicidal behavior?"

Results from the current study add to the literature on cultural attitudes about suicide, and the influence of exposure and acculturation on those attitudes. Much of the research on acculturation and suicide has focused on the relationship between acculturative stress and suicide risk. Besides Eshun's (2006) study on acculturation of suicide attitudes in Ghanaian immigrants, there is little research on immigrants' suicide attitudes changing in response to exposure to a new culture. The present study built on Eshun's study by including more cultural groups and also investigating the suicide attitudes of US-born students to see if international student attitudes become more similar to US-born students' attitudes. Range and colleagues (1999) suggested that future studies should correlate scores on suicide attitude questionnaires to decree of acculturation in Mexican Americans and African Americans. The present study expands on this topic. Hypothesis one was that differences would be observed between students who are US-born and internationals students (i.e., those who came to the US for higher education or

have been in the US for no more than 5 consecutive years prior to enrolling in college). Hypothesis two was that acculturation and experience from knowing someone who has attempted or died by suicide would impact suicide attitudes.

Method

Participants

Participants were US-born and international undergraduate and graduate students at a southern university. US-born participants were recruited through Study Board, a program that awards academic credit to students who participate in research studies conducted by the department. Specific recruitment of international students included a list serve email through the International Student Office, fliers, presentations to international student organizations, Study Board, and word-of-mouth. All participants were entered into a raffle for $50 gift cards.

In order to be included in the final sample, participants had to be at least 18 years of age and full-time students who were not enrolled in university Navitas classes. Full-time status indicates students have sufficient English skills to fill out the self-report measures in English. In order to be admitted as a full-time student at WKU, international students must have demonstrated sufficient English skills to be able to take classes in English through their Test of English as a Foreign Language (TOEFL) score or an English as a Second Language International (ESLI) certification. Current Navitas students were not included in the final sample because their TOEFL scores were not high enough to be enrolled in regular university classes, though Navitas courses are equivalent to regular university courses and Navitas students are considered “full-time.”

Data was collected from 201 students. Because of time constraints, data for 156 participants were entered. Two cases were removed because they did not fit the inclusion criteria (e.g. had not completed ESLI), and one was removed for validity reasons for a total of 153 participants. "International student" was operationalized to mean students who were born abroad and came to the United States for higher education or had lived in the US for no more than five consecutive years prior to enrolling to college.

The final sample consisted of 107 females (70%) and 45 (30%) males. The mean age was 19.55 (*SE* = 0.29). Fifty-five participants were raised in Protestantism (36%), 34 in Catholicism (22.2%), seven in Islam (4.6%), three in Hinduism (2%), three in Buddhism (2%), five in Agnosticism/Atheism (3.3%), 37 in some other religious denomination (24.2%) and nine had no religious upbringing (5.9%). Forty-four participants reported currently practicing Protestantism (28.8%), 25 Catholicism (16.3%), seven Islam (4.6%), two Hinduism (1.3%), two Buddhism (1.3%), 17 Agnosticism/Atheism (11.1%), 30 other (19.6%), and 25 no religion (16.3%). One participant reported currently practicing Islam and Hinduism.

Twenty-six international students were included in the final sample (17%). Nations that were most represented in the sub-sample were Brazil (n = 4), Saudi Arabia (n = 4), India (n = 3), and Vietnam (n = 3). Other nations included Australia, China, United Arab Emirates, El Salvador, Germany, Iran, Mexico, Nigeria, Pakistan, and Switzerland.

The length of consecutive time international students had lived in the US ranged from four months to five years. Four students had lived here for less than 1 year (15.4%),

six for between 1 and 2 years (23.1%), seven for between 2 and 3 years (26.9%), five for 3 years (19.2%), and two for four years (8.7%). One participant lived in the US for 6 years total, but was included in the international student subsample as the consecutive length of time was less than 5 years.

One-hundred five of the participants from the total sample reported knowing someone who had attempted or died by suicide (68.6%). Fifteen of these (14.3%) were international students and 90 were US students (85.7%). Ninety of the 127 US students (70.9%) and 15 of the 26 international students (57.7%) had personal experience with suicide.

Assessment Battery

The assessment battery included self-report measures of acculturation, suicide attitudes, a reading comprehension check, and a demographics questionnaire. A cross-cultural psychologist and a faculty member born in China reviewed the assessment battery and slight modifications were made to some of the words for cultural considerations.

Vancouver Index of Acculturation (VIA). The VIA (Ryder, Allen, & Paulhus, 2000; see Appendix A) is a 21-item Likert scale assessing how much an individual identifies with or participates in American culture (which had been changed from "North American" culture) and their "heritage culture" (i.e., "the culture that has influenced them the most"). The first item asks the participant to list their heritage culture. The next 20 consist of 10 pairs of items, each item only differing in the reference culture. The items ask participants to rate how much they agree or disagree with the statement (e.g., "I often

participate in my heritage cultural traditions."). Higher scores indicate higher levels of identification with the reference culture.

Measures of Suicide Attitudes. Two measure of suicide attitudes were selected for this study. The Suicide Opinion Questionnaire (SOQ; Domino, Moore, Westlake, & Gibson, 1982; Domino, 2005; see Appendix B) is a 100-item questionnaire which asks participants to rate how much they agree or disagree with statements about suicide on a five-point scale. In the present study, lower scores indicated more agreement and higher scores indicated more disagreement. The SOQ consists of 8 subscales that reflect different opinions on suicide, such as the role of religion, mental illness, and anger. Sixty-four of the 100 items fit into the established subscales and were used in the final analyses. Definitions were added in parenthesis after words which may be challenging for non-native English speakers.

The Suicide Attitude Vignette Experience (SAVE; Stiluon, McDowell, & Shamblin, 1984; see Appendix C) lists 10 vignettes about an adolescent who attempted suicide. Participants were asked to rate how much they sympathize, empathize, and agree with the attempt on a five-point Likert scale. Higher scores indicate higher levels of sympathy, empathy, or agreement. Slight modifications to wording in some of the vignettes were made in order to fit multiple cultural contexts. In addition, definitions were included for "sympathy," "empathy," and other words which may be challenging for non-native English speakers.

Reading Comprehension. A reading comprehension check was added in order to verify participants had sufficient English reading comprehension skills. It included a

small paragraph telling a story and four short-answer questions about the content of the story (see Appendix D). Correct answers were coded as "1" and incorrect as "0." We decided that participants who missed more than one item would be removed from the final sample, but none of the participants missed more than one. This was used to supplement items inquiring about previous English language instruction on the demographics questionnaire.

Demographics. The Demographics Data Survey (DDS; see Appendix E) consists of demographic items including gender, age, race/ethnicity, and religion. Items which were unrelated to the research question were removed from the measure. Items related to a history of knowing someone with suicidal behaviors, time spent in the United States or other countries, and previous English language instruction were added to the measure.

Procedures

Participants filled out the assessment battery in person in an individual or group setting at a scheduled time on the university's campus. Upon arrival, researchers enrolled students in the study by going through the informed consent process (see Appendix F for Informed Consent Document). Participants filled out the assessment battery and were given a debriefing statement and information about mental health facilities in the area after they completed the study (see Appendix G for Debriefing Statement and Mental Health Resource List). The study was approved by the university Institutional Review Board.

Statistical Analysis

To test the first hypothesis, we used a regression analyses to determine between-group differences in suicide attitudes. International status was the predictor variable and suicide attitudes were the outcome variables. To test our second hypothesis, we used a moderation analysis with acculturation and personal experience as moderating variables to determine the interactions between acculturation x international status and person experience x international status as related to suicide attitudes.

Results

An ordinary least squares regression analysis was used to determine between group-differences in suicide attitudes of international and US students. As shown in Table 1, significant differences were found on the SOQ subscales "Importance of Religion" (β= -3.70, *SE* = 1.13, *p* =.001), "Aggression and Anger" (β= -2.69, *SE* =.70, *p* < .001), and "Morally Bad" (β= -1.74, *SE* =.76, *p* = .02) and trending differences were found on the "Mental Illness" (β= -2.15, *SE* = 1.26, *p* = .09) and "Not Real/Cry for Help" subscales (β= -1.94, *SE* = 1.06, *p* = .07). On average, international students reported lower scores on these SOQ subscales, which indicate higher agreement with the opinion that suicide runs counter to religious beliefs, reflects aggression and anger, and is morally bad. Significant between-group differences were also found on the SAVE "Sympathy" subscale (β= -5.59, *SE* = 1.93, *p* = .004) and a trending significant difference on the "Agree with Action" subscale (β= -2.94, *SE* = 1.70, *p* = .09).

Table 1

Regression Analysis of International Students and Suicide Attitudes

	Subscale	B	SE	T	*P*	95% CI
SOQ	Mental Illness	-2.15	1.26	-1.71	0.09	-4.64, 0.34
	Not Real/Cry for Help	-1.94	1.06	-1.84	0.07	-4.04, 0.15
	Right to Die	-2.02	1.33	-1.52	0.13	-4.65, 0.61
	Importance of Religion	-3.70	1.13	-3.27	0.001**	-5.94, -1.47
	Impulsive	0.27	0.69	0.40	0.69	-1.08, 1.63
	Normal	-0.62	1.00	-0.62	0.54	-2.58, 1.35
	Aggression/Anger	-2.69	0.70	-3.84	<0.001**	-4.07, -1.30
	Morally Bad	-1.74	0.76	-2.30	0.02*	-3.23, -0.24
SAVE	Sympathy	-5.59	1.93	-2.89	0.004**	-9.40, -1.77
	Empathy	1.10	2.20	0.50	0.62	-3.24, 5.46
	Agreement	-2.94	1.70	-1.73	0.09	-6.29, 0.41

*Note. *p < .05, ** p < .01.*

Moderation analyses were used to determine interactions between acculturation and personal experience, international status, and suicide attitudes. Though overall, International students displayed more agreement with SOQ subscales, students who were more acculturated showed significantly less agreement with the SOQ "Mental Illness" (β=.29, *SE* = .11, *p* =.007), "Importance of Religion" (β= .35, *SE* = .09, *p* < .000), "Aggression and Anger" (β=.14, *SE* = .06, *p* = .02), and "Morally Bad" subscales (β=.19, *SE* = .06, *p* = .003; Table 2, Figure 1) than less acculturated international students. There were no significant interactions between acculturation, international status, and the SAVE subscales.

Moderation analyses were also used to examine the interaction between personal experience, international status, and suicide attitudes. As shown in Table 2, international students who had previously been exposed to suicidal behavior demonstrated a significantly higher coefficient on the SAVE "Agree with Action" subscale (β= 7.05, *SE* = 3.45, *p* =.04) and a higher coefficient on the "Sympathy" subscale approaching statistical significance (β=6.93, *SE* = 3.86, *p* =.08). There were no significant interactions between personal experience, international status, and the SOQ subscales.

Table 2

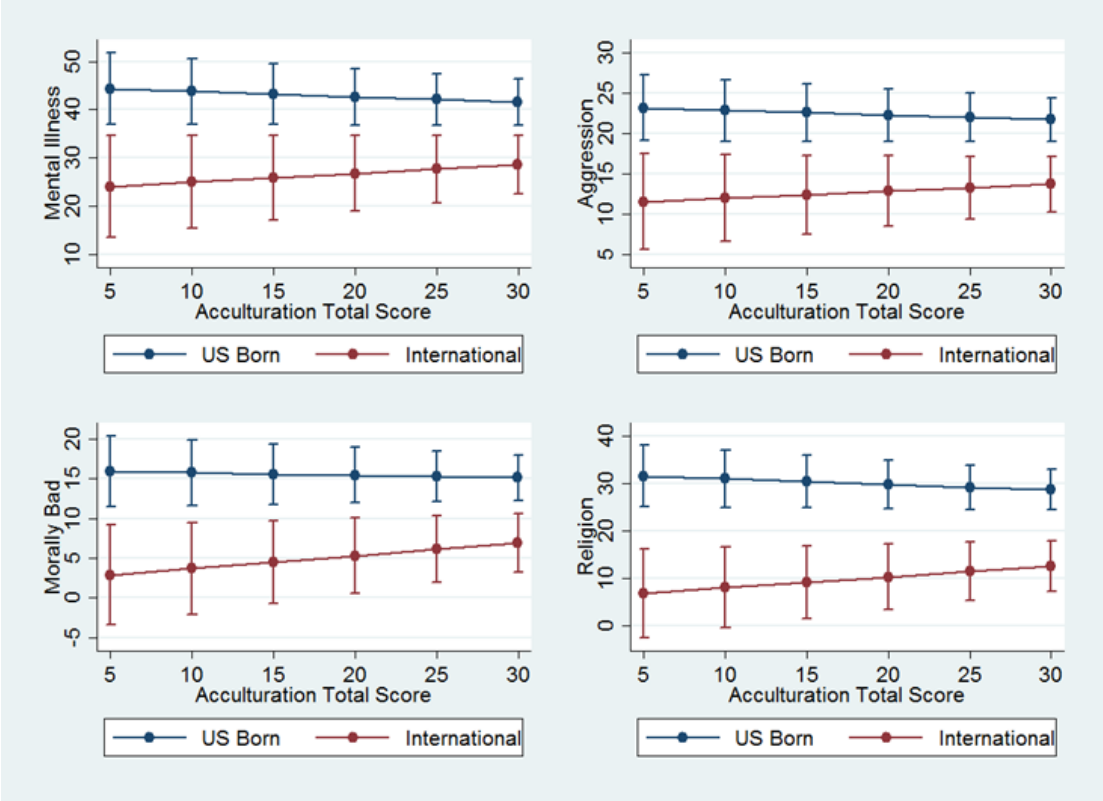
Interactions between Acculturation x International Status, Personal Experience x International Status and Suicide Attitudes

	Subscale	B	SE	T	*P*	95% CI
SOQ	Mental Illness	0.29	0.11	2.76	0.007**	0.08, 0.51
	Not Real/Cry for Help	-0.13	0.09	-1.44	0.15	-0.31, 0.04
	Importance of Religion	0.35	0.09	3.66	< 0.001**	0.16, 0.53
	Aggression/Anger	0.14	0.06	2.42	0.02*	0.03, 0.26
	Morally Bad	0.19	0.06	3.01	0.003**	0.07, 0.32
SAVE	Sympathy	6.93	3.86	1.79	0.08	-0.70, 14.57
	Agreement	7.05	3.44	2.05	0.04*	0.24, 13.86

*Note. *p < .05, ** p < .01.*

Figure 1

Interactions between Acculturation x International Status and Suicide Attitudes (SOQ)



Discussion

The purpose of this study was to examine suicide attitudes of US and international college students, and how individual factors (i.e., acculturation and personal experience) influence those attitudes. The results from the present study support both of the hypotheses. International students' suicide attitudes are different from those of US students but acculturation and exposure to suicidal behavior appear to impact these attitudes in international students.

Overall, international students reported different attitudes about suicide than the US students. On average, international students had negative coefficients on the SOQ, indicating more agreement with certain ideas about suicide – specifically that suicide runs counter to religious beliefs, reflects aggression and anger, and is morally bad. On the SAVE, international students had significantly less sympathy for the suicide vignettes.

When the interaction between international status, suicide attitudes and acculturation was analyzed, international students who were more acculturated to mainstream culture demonstrated significantly higher coefficients on the SOQ "Mental Illness," "Importance of Religion," "Aggression/Anger," and "Morally Bad" subscales. This indicates the more acculturated international students had less religious intolerance of suicide and more disagreement that suicide is an aggressive and angry act and is morally wrong. When the interaction between international status, suicide attitudes, and personal experience was examined, international students who had previously known

someone who had died by or attempted suicide scored higher on the SAVE "Agreement" subscale, indicating more agreement with fictional suicide attempts.

It is interesting to note that the only significant interactions with acculturation were with SOQ subscales and the only significant interaction with personal experience was with a SAVE subscale. This seems to make sense because the SOQ asks participants to rate their agreement with certain concepts or opinions related to suicide, while the SAVE asks participants to rate how much they sympathize, empathize, and agree with a fictional suicide attempt. The SAVE is based on perspective, which may change through exposure to a loved one's suicide attempt or death more so than exposure to a new culture.

Results from this study are consistent with the current literature on cultural attitudes about suicide and the influence of acculturation and exposure on these attitudes. First, the observed between-group differences in US and international student attitudes is consistent with Colucci and Martin's conclusion (2007) that Americans demonstrate more tolerant, accepting attitudes than some cultures, such as Ghanaian, Nigerian, and Mexican American culture. Though there is a large amount of heterogeneity in the current study's international subsample and no conclusions about specific cultural attitudes could be made, US students seem to display less extreme opinions about suicide and had more sympathy for fictional suicide attempts than the international students.

Though no conclusions of specific cultural groups' suicide attitudes could be made, it can be noted that Islam religion was represented in the international student subsample. The SOQ "Importance of Religion" and "Morally Bad" subscales were both

found to be significant in both the regression and moderation analyses and previous literature suggests Islam forbids suicide for moral and religious reasons (Kamal and Lowenthal, 2002; Lester, 2006).

The current study follows Range and colleagues' (1999) suggestion to investigate the correlation between suicide attitudes and degree of acculturation in various cultural groups. Eshun's findings (2006) that acculturation impacted Ghanaian immigrants' suicide attitudes informed our hypothesis that acculturation would impact suicide attitudes in international students. Results from the present study are consistent with Eshun's findings that psychological acculturation is positively correlated with less negative suicide attitudes. Specifically, immigrants who were more psychologically acculturated reported more tolerant (i.e., positive) suicide attitudes. Eshun also measured length of residency, though acculturation could be more descriptive than length of residency as it encompasses psychological and behavioral constructs. The present study builds on Eshun's research by gathering data on suicide attitudes of US students to see if international students' attitudes become more similar to those of US students in response to acculturation. This was found to be the case.

The existing literature regarding the impact of personal experience on suicide attitudes is mixed. Hjelmeland and colleagues (2008) found that exposure to suicide through a personal relationship had some influence on opinions about suicide (e.g., suicide is a right, suicide cannot be prevented), while Zhang and Jia (2009-10) found that the suicide of a family member did not impact suicide attitudes in Chinese participants. The present study seems to support Hjelmeland and colleagues' conclusions more, although there are differences in the methodologies of all three studies.

The present study suggests that there are differences in suicide attitudes between the US-born and international population in the United States. It also suggests that suicide attitudes of immigrants can change in response to exposure to the mainstream culture and a suicide attempt or death of a loved one. This has important implications for prevention and treatment efforts targeted toward multi-cultural populations. Cultural diversity is growing in the United States and acculturative stress is a known risk factor for suicide (Colucci et al., 2013; Goldston et al, 2008; Lester, 2008; Range et al., 1999). Understanding cultural suicide attitudes and individual influences on them will assist mental health professionals in developing and implementing culturally-sensitive prevention and treatment efforts. For example, Shadick and Akhter (2014) noted that international students at universities may be less likely than US-born students to approach mental health professionals when they are experiencing depression and suicidal thoughts. Students often may go to "gatekeepers" (e.g., religious leaders or teachers). It may be beneficial for clinicians to work alongside these individuals to train and prepare them to be attuned to cultural variations in suicide attitudes and expressions of suicidal thoughts or distress (Goldston et al., 2008; Shadick & Akhter, 2014).

Limitations

There are some limitations to the present study. First and foremost, we have a small but heterogeneous sample of international students. Therefore, no analysis of specific cultural attitudes was conducted. Some cultures may be more tolerant about suicide than the United States and some cultural attitudes may be more resistant to change, which could have influenced the results. In addition, because of our small international student sample, we were unable to run a three-way moderator analysis

between international status x length of residency x acculturation/personal experience and suicide attitudes. Future studies may devote more time and resources to recruiting a larger international sample. Another limitation is that the sample is made entirely of college students. People who come to the US from traumatic circumstances may have very different attitudes toward suicide than people who came here for higher education.

Because of limited time and resources, we were only able to enter 156 cases of the 201 datasets for the final analysis. However, because the remaining data consisted entirely of US-born students and our final US student sample was so large (n = 127), this may not have had much of an impact on the results.

A methodological limitation was that this was a cross-sectional study. In order to measure true changes in attitudes, we would need to conduct a longitudinal study. However, the results have important implications and could be used to inform future longitudinal studies in this line of research.

Conclusion

Because suicide is a worldwide problem, it is important to have a thorough understanding of various factors which influence rates and behaviors. The current study and previous literature suggest that attitudes about suicide are one of many factors that contribute to observed cross-cultural differences in suicide rates and behaviors (Colucci et al., 2013; Lester, 2008; Range et al., 1999). However, research also suggests that attitudes are dynamic and other factors besides culture, such as acculturation and personal experience, can change them (Eshun, 2006; Hjelmeland et al.; 2008). With increasing globalization and cultural diversity, it is important to investigate the interaction between

culture, individual factors, and suicide attitudes. The current study addressed both of these questions and adds to this line of research.

References

Ajdacic-Gross, V., Weiss, M.G., Ring, M., Hepp, U., Bopp, M., Gutzwiller, F., & Rössler W. (2008). Methods of suicide: International suicide patterns derived from the WHO mortality database. *Bulletin of the World Health Organization, 86*(9), 726-732.

American Association of Suicidology. (2015). [Table illustration summary on national suicide rates and behaviors]. *U.S.A. Suicide: 2014 Official Final Data.* Retrieved from http://www.suicidology.org/Portals/14/docs/Resources/FactSheets/2014/2014datapgsv1b.pdf

Colucci, E., Lester, D., Hjelmeland, H., & Park, B.C.B. (2013). E. Colucci, and D. Lester (Eds.). *Suicide and Culture: Understanding the Context.* Cambridge, MA: Hogrefe Publishing.

Colucci, E. & Martin. (2007). Ethnocultural aspects of suicide in young people: A systematic literature review part 2: Risk factors, precipitating agents, and attitudes toward suicide. *Suicide and Life-Threatening Behavior,* 37(2), 222-237.

Domino, G., Moore, D., Westlake, L., & Gibson, L. (1982). Attitudes toward suicide: A factor analytic approach. *Journal of Clinical Psychology, 38*(2), 257-262.

Domino, G. (2005). Cross-Cultural attitudes toward suicide: The SOQ and a personal Odyssey. *Archives of Suicide Research, 9*(2), 107-122.

Early, K. E., & Akers, R. L. (1993). "It's a White thing:" An exploration of beliefs about suicide in the African American community. *Deviant Behavior, 14*(4), 227–296.

Eshun, S. (2006). Acculturation and suicide attitudes: A study of perceptions about suicide among a sample of Ghanaian immigrants in the United States. *Psychological Reports, 99*(1), 295-304.

Goldston, D.B., Molock, S.D., Whitbeck, L.B., Murakami, J.L. Zayas, L.H., & Hall, G.C.N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist, 63*(1), 14-31.

Hjelmeland, H., Akotia, C.S., Owens, V., Knizek, B.L., Nordvik, H., Schroeder, R., & Kinyanda, E. (2008). Self-reported suicidal behavior and attitudes toward suicide and suicide prevention among psychology students in Ghana, Uganda, and Norway. *Crisis, 29*(1), 20-31.

Kamal, Z. & Loewenthal, K.M. (2002). Suicide beliefs and behaviors among young Muslims and Hindus in the UK. *Mental Health, Religion, and Culture, 5*(2), 111-118.

Lester, D. (2006). Suicide and Islam. *Archives of Suicide Research, 10*(1), 77-97.

Lester, D. (2008). Suicide and culture. *World Cultural Psychiatry Research Review, 3*(2), 51-68.

Lester, D. & Akande, A. (1994). Attitudes about suicide among the Yoruba of Nigeria. *Journal of Social Psychology, 134*(6), 851-853.

Osafo, J., Hjelmeland, H., Akotia, C.S., & Knizek, B.L. (2011). The meanings of suicidal behavior to psychology students in Ghana: A qualitative approach. *Transcultural Psychiatry,48*(5), 643-659.

Range, L.M., Leach, M.M., McIntyre, D., Posey-Deters, P.B., Marion, M.S., Kavoc, S.H., Banos, J.H., & Vigil, J. (1999). Multicultural perspectives on suicide. *Aggression and Violent Behavior, 4*(4), 413-430.

Ryder, A.G., Alden, L.E., & Paulhus, D.L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79*(1), 49-65.

Shadick, R. & Akhter, S. (2014). Suicide prevention with diverse college students. *Journal of College Student Psychotherapy, 28*(2), 117-131.

Stiluon, J.M., McDowell, E.E., & Shamblin, J.B. (1984). The Suicide Attitude Vignette Experience: A method for measuring adolescent attitudes toward suicide. *Death Education, 8*(1), 65-79.

World Health Organization. (2015a). *Suicide data.* Available from http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/

World Health Organization. (2015b). [Table illustration of suicide rates by country]. *Global Health Observatory Suicide Rates Data by Country.* Retrieved from http://apps.who.int/gho/data/node.main.MHSUICIDE?lang=en

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

Zhang, J. & Jia, C. (2009-10). Attitudes toward suicide: The effect of suicide death in the family. *Omega, 60*(4), 365-382.

APPENDIX A

Vancouver Index of Acculturation

Please answer each question as carefully as possible by circling one of the numbers to the right of each question to indicate your degree of agreement or disagreement.

Many of the questions will refer to your *heritage culture*, meaning the culture that has influenced you the *most* (other than American culture). It may be the culture of your birth, the culture in which you have been raised, or another culture that forms part of your background. If there are several such cultures, pick the one that has influenced you the *most* (for example, Irish, Chinese, Mexican, Black). If you do not feel that you have been influenced by any other culture, please try to identify a culture that may have had an impact on previous generations of your family.

Please write your *heritage culture* in the space provided. _____

Use the following key to help guide your answers:

Strongly Disagree		Disagree		Neutral/ Undecided		Agree		Strongly Agree
1	2	3	4	5	6	7	8	9

1. I often participate in my *heritage cultural* traditions.

   1 2 3 4 5 6 7 8 9

2. I often participate in mainstream American cultural traditions.

   1 2 3 4 5 6 7 8 9

3. I would be willing to marry a person from my *heritage* culture.

   1 2 3 4 5 6 7 8 9

4. I would be willing to marry an American person.

   1 2 3 4 5 6 7 8 9

5. I enjoy social activities with people from the same *heritage culture* as myself.

   1 2 3 4 5 6 7 8 9

6. I enjoy social activities with typical American people.

   1 2 3 4 5 6 7 8 9

7. I am comfortable working with people from the same *heritage culture* as myself.

   1 2 3 4 5 6 7 8 9

8. I am comfortable working with typical American people.

   1 2 3 4 5 6 7 8 9

9. I enjoy entertainment (for example, movies and music) from my *heritage culture.*

   1 2 3 4 5 6 7 8 9

10. I enjoy American entertainment (for example, movies and music).

    1 2 3 4 5 6 7 8 9

11. I often behave in ways that are typical of my *heritage culture.*

    1 2 3 4 5 6 7 8 9

12. I often behave in ways that are "typically American."

    1 2 3 4 5 6 7 8 9

13. It is important to me to maintain or develop the practices of my *heritage culture.*

    1 2 3 4 5 6 7 8 9

14. It is important to me to maintain or develop American cultural practices.

    1 2 3 4 5 6 7 8 9

15. I believe in the values of my *heritage culture*.

1 2 3 4 5 6 7 8 9

16. I believe in mainstream American values

1 2 3 4 5 6 7 8 9

17. I enjoy the jokes and humor of my *heritage culture*.

1 2 3 4 5 6 7 8 9

18. I enjoy typical American jokes and humor.

1 2 3 4 5 6 7 8 9

19. I am interested in having friends from my *heritage culture.*

1 2 3 4 5 6 7 8 9

20. I am interested in having American friends.

1 2 3 4 5 6 7 8 9

APPENDIX B

Suicide Opinion Questionnaire

This is not a test or a measure of your own suicidality. It is a survey of your personal opinions. There are no right or wrong answers, only your honest opinion is requested.

For each item, indicate whether you:
1 = Strongly Agree
2 = Agree
3 = Undecided
4 = Disagree
5 = Strongly Disagree

1. Most persons who attempt suicide are lonely and depressed. _____

2. Almost everyone has at one time or another thought about suicide. _____

5. Suicide prevention centers actually infringe on a person's right to his life. _____

6. Many suicides are triggered by arguments with a spouse. _____

7. The higher incidence of suicide is due to the lesser influence of religion. _____

8. Many suicide notes reveal substantial anger towards the world. _____

9. I would feel ashamed if a member of my family committed suicide. _____

10. Many suicide attempts are impulsive (to act without thinking it through) in nature. _____

11. Many suicides are the result of the desire of the victim to "get even" with someone. _____

13. People with incurable diseases should be allowed to commit suicide in a dignified manner. _____

14. Those who threaten to commit suicide rarely do so. _____

15. Suicide is more prevalent among the very rich and the very poor. _____

16. Individuals who kill themselves out of patriotism do so, not because they are courageous, but because they enjoy taking major risks. _____

17. Suicide is a leading cause of death in the U.S. _____

18. Suicide is an acceptable means to end an incurable illness. _____

19. People who commit suicide are usually mentally ill. _____

20. Some people commit suicide as an act of self-punishment. _____

21. The feeling of despair reflected in the act of suicide is contrary (opposite of, disagree with) to the teaching of most major religions. _____

24. John Doe, age 45, has just committed suicide. An investigation will probably reveal that he has considered suicide for quite a few years. _____

25. Suicide is acceptable for aged and infirm persons. _____

26. The suicide rate among physicians is substantially greater than for other occupation groups. _____

27. The Japanese kamikaze pilots who destroyed themselves by flying their airplanes into a ship should not he considered suicide victims. _____

29. Suicide is clear evidence that man has a basically aggressive and destructive nature. _____

31. Most people who try to kill themselves don't really want to die. _____

32. Suicide happens without warning. _____

33. A business executive arrested for fraud or other illegal practices should face punishment like a man rather than seek suicide as an escape. _____

35. A person who tried to commit suicide is not really responsible for those actions. _____

36. About 75% of those who successfully commit suicide have attempted suicide at least once before. _____

37. It's rare for someone who is thinking about suicide to be dissuaded (talked out of something) by a "friendly ear." _____

38. People who commit suicide must have a weak personality structure. _____

41. A large percentage of suicide victims come from broken homes. _____

43. People who set themselves on fire to call attention to some political or religious issue are mentally unbalanced. _____

45. Most people who commit suicide do not believe in an afterlife. _____

46. In times of war, for a captured soldier to commit suicide is an act of heroism. _____

47. Suicide attempters are typically trying to get even with someone. _____

48. Once a person is suicidal, he is suicidal forever. _____

49. There may be situations where the only reasonable resolution is suicide. _____

50. People should be prevented from committing suicide since most are not acting rationally at the time. _____

54. Prisoners in jail who attempt suicide are simply trying to get better living conditions. _____

55. Suicides among young people (e.g., college students) are particularly puzzling since they have everything to live for. _____

56. Once a person survives a suicide attempt, the probability of his trying again is minimal. _____

57. In general, suicide is an evil act not to be condoned (accepted, allowed). _____

58. People who attempt suicide and live should be required to undertake therapy to understand their inner motivation. _____

59. Suicide is a normal behavior. _____

61. If a culture were to allow the open expression of feelings like anger and shame, the suicide rate would decrease substantially. _____

62. From an evolutionary point of view, suicide is a natural means by which the less mentally fit are eliminated. _____

63. Suicide attempters who use public places (such as a bridge or tall building) are more interested in getting attention. _____

65. External factors, like lack of money, are a major reason for suicide. _____

67. Sometimes suicide is the only escape from life's problems. _____

68. Suicide is a very serious moral transgression (an offense, crime, or sin). _____

69. Some individuals have committed suicide to preserve their honor; these were victims of cultural values rather than disturbed personal attitudes. _____

70. If someone wants to commit suicide, it is their business and we should not interfere. _____

71. A suicide attempt is essentially a "cry for help." _____

73. Heroic suicides (e.g. the soldier in war throwing himself on a live grenade) should be viewed differently from other suicides (e.g. jumping off a bridge). _____

74. The most frequent message in suicide notes is of loneliness. _____

75. Usually, relatives of a suicide victim had no idea of what was about to happen. _____

77. Suicide attempts are typically preceded by feelings that life is no longer worth living. _____

78. Suicide goes against the laws of God and/or of nature. _____

79. We should have "suicide clinics" where people who want to die could do so in a painless and private manner. _____

80. Those people who attempt suicide are usually trying to get sympathy from others. _____

81. People who commit suicide lack solid religious convictions. _____

82. People with no roots or family ties are more likely to attempt suicide. _____

83. People who bungle (to not do well) suicide attempts really did not intend to die in the first place. _____

85. Potentially, every one of us can be a suicide victim. _____

87. People who die by suicide should not be buried in the same cemetery as those who die naturally. _____

88. Most people who commit suicide do not believe in God. _____

89. Children from larger families (i.e., three or more children) are less likely to commit suicide as adults than single or only children. _____

90. Suicide attempters are, as individuals, more rigid and less flexible than non-attempters. _____

91. The large majority of suicide attempts result in death. _____

93. People who attempt suicide are, as a group, less religious. _____

94. As a group, people who commit suicide experienced disturbed family relationships when they were young. _____

95. People do not have the right to take their own lives. _____

96. Most people who attempt suicide fail in their attempts. _____

97. Those who commit suicide are cowards who cannot face life's challenges._____

98. Individuals who are depressed are more likely to commit suicide. _____

APPENDIX C

Suicide Attitude Vignette Experience

For each scenario, please rate how much you sympathize, empathize, and agree with the individual's actions on a scale from 1 to 5, with "1" meaning low sympathy, empathy, or agreement and "5" being high sympathy, empathy, or agreement. Please refer to the definitions of sympathy and empathy below.

Sympathy: the feeling that you care about and are sorry about someone else's trouble, grief, or misfortune

Empathy: the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another

1. Betty is a senior in high school. She has wanted to be a lawyer for four years. Her grades have been consistently falling each term. Last week she got back her university entrance scores and found they were so low that she will probably not be admitted into any university. Betty attempts to kill herself.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

2. Joe has been dating Gloria for three years. They are now in their senior year and have planned to be married after graduation. For the past two months they have been arguing more frequently than ever before. The day before a graduation party, Gloria ends the relationship. Joe attempts to kill himself.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

3. Jane has always been a child whose parents were very proud of her. She was obedient (to do what someone tells you to do; to follow a law or rule) and respectful and never gave them any trouble. However, lately, Jane doesn't seem able to do anything right. Her parents seem more demanding every day, and Jane tries to kill herself.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

4. John is a fat 15-year-old. For years he has been teased by his friends because of his size. Recently, his face has broken out with severe acne (small, swollen pimples on the face or neck), causing fellow students to tease him about his skin as well as his weight. When his classmates started referring to him as a "bloated strawberry," John attempted to kill himself.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

5. Ann has always thought of herself as an intelligent person. Two years ago she began using pot and drinking. At first she confined it to the weekends. Gradually she began to use harder drugs. Now, she finds she cannot start the day without drugs. She also is experiencing difficulty in learning, has lost weight because of the lack of appetite, and really isn't interested in much except for drugs. One day she tried to go without them, began to examine her life, and decided to try to kill herself.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

6. Tom is an 18-year-old who was in an automobile accident last year. He had been a member of a sports team and was very active in school activities. Now he is paralyzed from the waist down. He attempts suicide.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

7. Carol has had leukemia (a blood disease) since she was 13. She is now 17. She has known for over a year that the disease is most likely going to kill her. Lately the pain has increased to the point where the medicine no longer controls it. Carol attempts suicide.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

8. Don has always been close to his family, and felt that it was a happy family. Over the past year, however, his mother and father have been fighting more often than not. One night he comes in while they are arguing. They tell him they have decided to get a divorce and demand to know which parent he wants to live with. Don flees from home. Later that night he attempts suicide.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

9. Rhonda's mother died last year. She has felt depressed and lost since the death. When she thinks of her mother, she is overwhelmed by sadness and hopelessness. She is convinced that she will never be happy again. One night when the family is out, she attempts suicide.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

10. Bruce was driving his family's car to a high school sports game. The night was rainy. He didn't see a truck stalled across the road until he was almost on it. In the resulting accident, one of his passengers was killed and one was crippled. Bruce can't get over his feelings of guilt and sorrow about the accident. Two months later, he attempts suicide.

	Low				High
Sympathize	1	2	3	4	5
Empathize	1	2	3	4	5
Agree with Action	1	2	3	4	5

APPENDIX D

Reading Comprehension Check

The next section is a reading comprehension check. Please read the paragraph and answer the following questions.

Billy and his twin sister, Anna, are from a small, American town. Their parents moved to America from Germany before the twins were born. The family owns a restaurant which serves authentic, German food. Billy and Anna finish their secondary schooling and want to leave for university. However, their parents want them to stay and help with the restaurant, since they are both growing older and would like it to stay in the family. Anna and Billy both love their parents but also want to go off and see the world on their own. The family talks it over one night and they come to an agreement. Anna and Billy decided to go to a nearby university, so they can come home on the weekends and help in the restaurant.

1) Did the twins ever live in Germany? _____

2) Why did Billy and Anna's parents want them to stay at home instead of going to a university to continue schooling?

_____

3) What did Billy and Anna want to do after completing secondary schooling?

_____

_____

_____

4) What was the solution Billy, Anna, and their parents agreed on?

_____

_____

_____

APPENDIX E

Demographics Data Survey (DDS)

1. _____ Sex: 1=Female, 2=Male, 3=Transgendered

2. _____/_____/_____ Date of Birth (month/day/year)

3. _____ Age (in years)

4. _____Were you born in the United States? 0=No 1=Yes

   If you were not born in the United States:

   4a. In what country were you born?_____

   4b. _____At what age did you move here?

5. _____Is your ethnic background Hispanic or Latino? 0=Not Hispanic/Latino 1 = Yes

6. _____What is your racial background?

   1=White/Caucasian (includes Middle Eastern and North African origins)
   2=Native American, American Indian, or Alaska Native
   3=Black or African American (except North African origins is counted as White)
   4=Chinese or Chinese American
   5=Japanese or Japanese American
   6=Korean or Korean American
   7=Other Asian or other Asian American (includes India, Malaysia, Pakistan, Philippines)
   8=Mexican, Mexican American or Chicano
   9=Puerto Rican
   10=Other Hispanic/Latino
   11=East Indian
   12=Middle Eastern/Arab
   14=Native Hawaiian or other Pacific Islander
   13=Other (Please specify_____)

7. _____ If bi-racial, select a second answer from the following choices. (-8 if no other racial group)

1=White/Caucasian (includes Middle Eastern and North African origins)
2=Native American, American Indian, or Alaska Native
3=Black or African American (except North African origins is counted as White)
4=Chinese or Chinese American
5=Japanese or Japanese American
6=Korean or Korean American
7=Other Asian or other Asian American (includes India, Malaysia, Pakistan, Philippines)
8=Mexican, Mexican American or Chicano
9=Puerto Rican
10=Other Hispanic/Latino
11=East Indian
12=Middle Eastern/Arab
14=Native Hawaiian or other Pacific Islander
13=Other (Please specify _____)
15=More than one other racial group
(List all:_____)

8. _____ In what religion were you raised?

1. Protestantism (Please specify denomination _____)
2. Catholicism
3. Judaism
4. Islam
5. Hindu
6. Buddhism
7. Agnosticism or Atheism
8. Other (Please specify denomination _____)
9. None

9. _____ What religion do you now practice?

1. Protestantism (Please specify denomination _____)
2. Catholicism
3. Judaism
4. Islam
5. Hindu
6. Buddhism
7. Agnosticism or Atheism

8. Other (Please specify denomination _____)
9. None

10. Please enter the code number that corresponds to the highest grade of formal education you have completed. _____

1=eight grade or less
2=some high school
3=GED
4=high school graduate
5=business or technical training beyond high school
6=some college
7=college graduate
8=some graduate or professional school beyond college
9=master's degree
10=doctoral degree

11. How many of your immediate family (e.g., children, brothers, parents, spouse) live in your geographic area (within a 50-mile radius)? _____

12. How long have you lived in the United States? _____

13. Have you lived in another country (besides the United States) for longer than 6 months? _____ (0=No, 1=Yes)

13a. If yes, where were you living? (If born outside of US, enter native country and any other country lived in) _____

14. Do you know anyone who has attempted or died by suicide? _____ (0=No, 1=Yes)

14a. If yes, where were you living?

1. _____
2. _____
3. _____
4. _____

14b. How old were you?

1. _____
2. _____
3. _____
4. _____

14c. What was their relationship to you?

1. _____
2. _____
3. _____
4. _____

15. Have you ever been through ESLI on WKU's campus? _____ (0=No, 1=Yes)

15a. If yes, have you completed it? _____ (0=No, 1=Yes)

16. Did you complete your first year at WKU in the WKU Pathways (Navitas) program? _____ (0=No, 1=Yes)

APPENDIX F

Informed Consent Document

Project Title: Cultural Diversity and the Impact of Acculturation and Personal Experience on Perceptions of Suicide

Investigators: Susan Breidenich, Undergraduate in the Department of Psychological Sciences, (859) 802-1043

Stephen O'Connor, Ph.D, Assistant Professor, Department of Psychological Sciences, (270) 745-4328

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask him/her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:**

This study will examine whether culture and acculturation impact perceptions of suicide. Acculturation measures the extent to which an individual's culture of origin mixes with the dominant culture, in this case American culture. The study will also examine whether knowing someone who died by suicide or attempt suicide impacts perceptions of suicide. This is not a study measuring if you are suicidal; we will not be asking you personal questions about your own mental or physical health.

2. **Explanation of Procedures:**
You will be asked to complete an assessment battery in person which will ask your opinions on suicide, levels of acculturation, whether you know someone close to you who has committed/attempted suicide, and demographic questions. It should take no more than 40 minutes to complete.

3. **Discomfort and Risks:**
There are no physical risks associated with this study. Because we are asking questions about a sensitive subject, you may experience some emotional discomfort. As such, we will provide you with a debriefing statement and a list of clinics in the greater Bowling Green area that could provide professional services if you perceived such a need. Breach of confidentiality is a risk to being in the study if it happens that your information is taken by or seen by someone who should not have it or see it.

4. **Benefits:**
You will be entered into a drawing for a $50 gift card. In addition, perceptions of suicide may have an impact on how communities approach suicide prevention and treatment. When we have a better understanding of how different cultures perceive suicide, and how acculturation and personal experience influence those perceptions, we may improve treatment and prevention programs in the community.

5. **Confidentiality:**
A code number will be assigned to your data and your name will not be linked to the data. The connection between your subject identifier and code number will be kept separately. Your data will be placed in a locked room and only the research staff will have access to it. Your data will be kept in an identifiable form until three years after your date of enrollment. Data in an unidentifiable form will be retained indefinitely. All hardcopies of study related materials (assessments and consent) will be kept in a locked cabinet within a locked room. All electronic data will be stored on departmental desktop computers (which are password Protected) on a secure departmental server/behind a secure departmental firewall.

6. **Refusal/Withdrawal:**
Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

(consent form continued)

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

_____	_____
Signature of Participant	Date
_____	_____
Witness	Date

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

APPENDIX G

Debriefing Statement and Mental Health Resource List

If you have questions or concerns about the study, including any emotional upset related to completion of the survey, please contact Stephen O'Connor at (270) 745-4328. Also, please take note of the mental health agencies and organizations in south and west Kentucky regions that may be able to provide appropriate follow-up care to address your needs.

Mental Healthcare Facilities in South-Central Kentucky

Organization	Address	City	Phone	Website/Email
WKU Counseling and Testing Center	Potter Hall, 409 1906 College Heights Blvd #11024	Bowling Green	270-745-3159	http://www.wku.edu/heretohelp/
LifeSkills Service Center	380 Suwannee Trail St.	Bowling Green	270-901-5000	http://www.lifeskills.com/
LifeSkills Adult Crisis Stabilization Unit	822 Woodway Dr.	Bowling Green	270-901-5000	http://www.lifeskills.com/
Lifeskills Service Center	608 Happy Valley Rd.	Glasgow	270-651-8378, ext. 1010	http://www.lifeskills.com/bhbarren.html
Lifeskills Service Center	222 Industrial D. North	Morgantown	270-536-3877	http://www.lifeskills.com/bhbutler.html
Lifeskills Service Center	237 East Sixth St.	Russellville	270-726-3629	http://www.lifeskills.com/bhlogan.html
Lifeskills Service Center	205 Mohawk, P.O. Box 596	Brownsville	270-597-2713	http://www.lifeskills.com/bhedmonson.html
Lifeskills Service Center	1118 West Union St.	Munfordville	270-524-9883	http://www.lifeskills.com/bhhart.html
Lifeskills Service Center	112 Sartin Dr.	Edmonton	270-432-4951	http://www.lifeskills.com/bhmetcalfe.html
Lifeskills Service Center	800 North Main St.	Tompkinsville	270-487-5655	http://www.lifeskills.com/bhmonroe.html
Lifeskills Service Center	512 Bowling Green Rd.	Scottsville	270-237-4481	http://www.lifeskills.com/bhallen.html
National Alliance for the Mentally Ill- NAMI-Bowling Green Affiliate	428 Center Street	Bowling Green	270-796-2606	www.nami.org
Alcoholics Anonymous	1013 East 13th Avenue	Bowling Green	270-782-5267	
Narcotics Anonymous	P.O. Box 1671		1-800-983-4131	
Barren River District Health Department	1109 State Street	Bowling Green	270-781-8039	www.barrenriverhealth.org
Commonwealth Health Free Clinic	740 East 10th Street	Bowling Green	270-781-9260	

Depressed Anonymous	1323 Melrose Drive & 1818 31-W Bypass	Bowling Green	270-782-7150	barry.blann@yahoo.com
Fairview Community Health Clinic	615 7th Avenue	Bowling Green	270-783-3573	
Matthew 25 AIDS Services, Inc.	452 Old Corydon Road	Henderson	270-826-0200	
Pennyroyal Mental Health Services	200 Clinic Drive	Madisonville	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/MadisonvilleClinic.html
Pennyroyal Mental Health Services	436 N Main St.	Madisonville	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/MadisonvilleClinic.html
Pennyroyal Mental Health Services	735 North Drive	Hopkinsville	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/HopAdult.html
Pennyroyal Mental Health Services	1350 Highway 62 West	Princeton	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/PrincetonClinic.html
Pennyroyal Mental Health Services	506 Hopkinsville St.	Greenville	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/GreenvilleClinic.html
Pennyroyal Mental Health Services	15095B Ft. Campbell Blvd	Oak Grove	1-877-473-7766	http://www.pennyroyalcenter.org/Clinics/OakGrove.html