

Ethnic, Gender, and Age Differences in Adolescent Nonfatal Suicidal Behaviors

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Abstract:

This study examined ethnic differences in adolescent nonfatal suicidal behaviors as well as age and gender variation both across and within ethnic groups. Using a large ($n = 14,346$) sample of adolescents in Grades 7 through 12, African Americans reported relatively high rates of suicidal thoughts and attempts and Southeast Asians reported high rates of suicidal thoughts. Hispanic Americans, European Americans, and Asian Americans were similar in their reports of nonfatal suicidal behaviors. Gender differences also varied across ethnicity as Southeast Asian boys (particularly older boys) reported more suicidal thoughts and attempts than Southeast Asian girls.

Keywords: Adolescents | Suicide | Ethnicity | Gender | Risk Factors | Suicidal Behaviors

Article:

As the third leading cause of death among adolescents and youth in the United States, suicide poses a significant public health concern (Centers for Disease Control and Prevention [CDC], 2008). Although identifying the exact cause of adolescent suicide is difficult, previous studies have identified suicidal thoughts and previous suicide attempt(s) as clear risk factors (Roberts, Roberts, & Xing, 2010; Spirito & Esposito-Smythers, 2006). There are encouraging signs, however, as national estimates suggest that rates of nonfatal suicidal behaviors (thoughts of suicide and suicide attempts; Crosby, Ortega, & Mellanson, 2011) among U.S. adolescents decreased over the past 20 years (CDC, 2009). For example, in 2009, roughly 14% of U.S. adolescents reported seriously considering killing themselves (down from 19% and 29% in 2001 and 1991, respectively) and 6% attempted suicide in the 12 months preceding being surveyed (down from 9% in 2001; CDC, 2009, 2010). Although such trends are good news regarding adolescent nonfatal suicidal behaviors, overall national estimates obscure important ethnic disparities both in relative risk and trends over time.

Asian American and Hispanic American adolescents, for example, may be at elevated risk for thinking about and attempting suicide compared to European American adolescents (CDC, 2009;

Vanderstoep, McCauley, Flynn, & Stone, 2009). Further, from 2001 to 2009 European American and Hispanic American adolescents declined in suicide attempts, but African American adolescents did not (CDC, 2009; Joe & Marcus, 2003). Moreover, despite arguments that adolescents from Southeast Asian groups may be at particularly high risk for negative mental health outcomes and suicidal thoughts (Hsu, Davies, & Hansen, 2004) few data are available in comparative studies to conclude whether nonfatal suicidal behaviors are relatively high or low among this group of adolescents.

Although most studies suggest that death via suicide across all age groups is higher among European Americans compared to other ethnicities, studies of adolescents' nonfatal suicidal behaviors tend to point to higher risk among ethnic minority youth and adolescents. Recent national estimates (CDC, 2010), for example, suggest that Hispanic American adolescents are at higher risk for suicidal thoughts and plans compared to European Americans and African Americans and at higher risk for suicide attempts than European Americans. Asian American college students and adolescents were also more likely than European American adolescents to seriously consider suicide in the previous year (Kisch, Leino, & Silverman, 2005; Vander Stoep, McCauley, Flynn, & Stone, 2009). These estimates somewhat contradict earlier studies using similar data sources (the Youth Risk Surveillance Behavior data [YRBS] from 1991 to 1997; Grunbaum, Lowry, Kann, & Pateman, 2000) that found lower reported rates of suicidal thoughts and plans among African American adolescents compared to European American, Hispanic American, and Asian American/Pacific Islander adolescents. In terms of self-reported suicide attempts, there were few ethnic differences in YRBS data with the exception that Hispanic American girls were more likely to indicate a suicide attempt than African Americans and European American girls. Moreover, using other national data sets researchers reported statistically equivalent rates of suicidal thoughts and attempts (Bearman & Moody, 2004; Wolitzky-Taylor et al. 2010) across ethnicity.

Overall, evidence of ethnic differences in suicidal thoughts and attempts is mixed. Complicating matters is that rates of suicidal thoughts and attempts are trending in different directions across ethnic groups over time. Data from the 2001 YRBS indicate that Hispanic American adolescents (12%) were more likely to have attempted suicide in the previous 12 months than African American (9%) and European American adolescents (8%). Data from 2009, however, indicate that African American and Hispanic American adolescents have similar rates of suicide attempts (8%) with both groups higher than European Americans (5%). These recent trends call into question whether or not Hispanic American adolescents should continue to be considered an “at-risk” group while African Americans are considered low-risk. An additional complication is that in large data sets, researchers rarely address within-Hispanic and within-Asian variation in nonfatal suicidal behaviors. Studies have suggested, however, that Puerto Ricans may be at-risk compared to both European Americans and other Hispanic American groups (Cuban Americans and Mexican Americans; Baca-Garcia et al., 2011; Oquendo, Lizardi, Greenwald, Weissman, & Mann, 2004) and that Mexican Americans may be relatively low-risk (Baca-Garcia et al., 2011).

Gender is another significant demographic predictor of both suicide and nonfatal suicidal behaviors. There is a “gender paradox” as boys and men are more likely to complete suicide (CDC, 2008), but girls and women are more likely to attempt suicide (CDC, 2010; Grunbaum et al., 2000; Langhinrichsen-Rohling, Friend, & Powell, 2009). Greater nonfatal suicidal behaviors among girls, however, also may vary as a function of age and also across ethnicity. A longitudinal study of European Americans, for example, suggested that suicidal thoughts and plans peak among girls in mid-adolescence but continue to increase into late adolescence for boys (Boeninger, Masyn, Feldman, & Conger, 2010). Accordingly, gender differences in suicidal thoughts and attempts tend to dissipate during late adolescence and into young adulthood (CDC, 2010; Lewinsohn, Rohde, Seeley, & Baldwin, 2001). Ethnic differences in nonfatal suicidal behaviors also tend to be greater when comparing girls across ethnicities than when ethnic comparisons are made of boys (CDC, 2010). Other studies have suggested that rates of suicide attempts are more similar between African American girls and boys and more discrepant between Hispanic American and European American adolescents (Langhinrichsen-Rohling et al., 2009). In addition, recent increases in suicidal attempts among African American boys have led to a closing of the gender gap among African Americans (Grunbaum et al., 2000; Joe & Marcus, 2003). In sum, gender differences also are important to consider in studies focused on ethnic disparities in adolescent nonfatal suicidal behaviors both across and within ethnicity.

In reference to age differences, previous studies have suggested a developmental trend in which nonfatal suicidal behaviors are rare prior to age 13 but rates increase through the high school years before decreasing in 12th grade and young adulthood (CDC, 2010; Lewinsohn et al., 2001; Vander Stoep et al., 2009). Although ethnic differences related to age and suicidal risk have rarely been considered, it is possible that age-related risk varies across ethnic groups. For example, a recent study of college students reported higher rates of suicidal thoughts among Asian Americans (relative to European Americans) (Kisch et al., 2005), suggesting that risk may increase or continue to be relatively high for some groups transitioning into adulthood and that ethnicity and age interact in predicting nonfatal suicidal behaviors.

Although national estimates are available to understand the incidence of suicidal thoughts and attempts among U.S. adolescents, changing estimates across ethnicity highlight a need to continue studying ethnic disparities in these nonfatal suicidal behaviors. Studies should also consider ethnic/gender/age differences in adolescent suicidal thoughts and attempts for greater awareness of differential risk across and within ethnicities. To the extent that relative risk among specific ethnicities and ethnicity/gender (and even age) combinations is unknown, prevention efforts that fail to target specific demographic groups at their peak risk will lack optimal efficacy (Lee, 2001). Perhaps more importantly, there are few comparative data including samples of Asian American adolescents generally and Southeast Asian adolescents specifically to understand relative risk for this growing population of American adolescents (Leong, Leach, & Gupta, 2008). Researchers argue that developmental experiences of Southeast Asian adolescents (e.g., Hmong, Cambodian, Laotian) are distinct from those of adolescents who are typically

grouped as panethnically Asian (e.g., Chinese, Korean) and are particularly understudied in the literature (Lee, 2001; Ngo & Le, 2007; Portes & Rumbaut, 1996). Moreover, this group is believed to be relatively at risk for negative mental health outcomes (Hsu et al., 2004; Portes & Rumbaut, 2001) and, consequently, efforts to reduce suicide in localized areas with larger groups of Southeast Asians may be compromised with few data to guide efforts.

Given that national estimates point to substantial variability across geographical locations in terms of adolescent suicidal risk (CDC, 2010) and that certain communities in the U.S. are experiencing rapid demographic changes associated with immigration (thus allowing for meaningful comparisons of within-Asian groups), community-based studies are needed that focus on local conditions associated with risk. As such, this study compared rates of suicidal thoughts and attempts in a large and ethnically diverse community sample of adolescents in Grades 7 through 12 in a county where there has been a rapid increase in the ethnic minority population in the past decade. In addition to comparing rates of suicidal thoughts and attempts across European American, African American, Hispanic American, Southeast Asian, and Asian American adolescents, we also considered age and gender variation within ethnic groups.

Method

Participants

The sample for this study came from the 2009 Dane County (Wisconsin) Youth Assessment (DCYA), a county-wide survey of students in Grades 7 through 12. Survey respondents indicated their ethnicity by selecting if they were “White (non-Hispanic),” “African American,” “Hispanic,” “Hmong/Southeast Asian,” “Asian” (nonHmong/Southeast Asian), “Native American,” “mixed race,” or “other.” For this study, respondents indicating that they were under 12 years, or 18 years and older, or were Native American, mixed race, or “other” in terms of their ethnic category were excluded because of relatively low sample sizes and to eliminate students who were moved up or held back in grade level. According to Census data (Dane County Department of Human Services, 2003b, 2008), the Asian American subsample is most likely comprised of adolescents from families with highly educated parents who are predominately Chinese, Korean, or Indian; the Hispanic American subsample is predominantly Mexican-origin (roughly 60%) with the remainder Central American and Puerto Rican; and the Southeast Asian sample is predominantly Hmong with smaller groups of Vietnamese, Thai, and Cambodians.

The present sample included 14,346 respondents but with statistical postsurvey weights applied (see sampling below) these data represent 21,109 adolescents. The unweighted frequencies in the sample (weighted samples and percentages are in parentheses) by ethnicity were European American, 11,840 (15,450, 73%); African American, 1,102 (2,806, 13%); Hispanic American, 708 (1,535, 7%); Southeast Asian, 334 (685, 3%); and Asian American, 362 (634, 3%). The mean age was 14.74 years ($SD = 1.61$) and the sample was 51% girls.

Procedure

The data collection was conducted by the Dane County Youth Commission (DCYC), an organization that partners with schools and community agencies to address youth health. DCYC conducts the survey of all middle and high school students (every five years) across 32 schools in 14 county school districts. A census survey strategy was implemented in smaller schools; random sampling was implemented in larger schools in the one metropolitan area. Postsurvey weights were constructed that adjust for unequal probabilities of participation in the surveys across schools and weighted estimates of suicidal thoughts and attempts therefore represent the population of students in the county.

During the early fall 2008 semester, students completed surveys electronically in school and those students absent on the original survey date were assessed during a follow-up survey. Parents were informed of the survey (weeks in advance) and could withdraw their consent for their child to participate while adolescents also had the opportunity to refuse participation. Data were provided to the lead author of this article in a de-identified format.

Measures

Survey items used in this study included age, gender, ethnicity, and both suicidal thoughts and attempts. The item assessing suicidal thoughts was, "During the past 30 days, have you seriously thought about killing yourself;" response options were "No," "Yes, but rarely," "Yes, some of the time," and "Yes, almost all of the time." The item assessing a suicidal attempt was, "During the past 12 months, have you attempted to kill yourself?" Response options were "No," "Yes, 1 time," and "Yes, more than 1 time." Each of these items was recoded into a 0/1 variable where 1 indicated any suicidal thoughts or any suicide attempt.

Results

Logistic regression results suggested that compared to European Americans (the reference group), African Americans and Southeast Asians were more likely to report suicidal thoughts in the previous 30 days, whereas Hispanic Americans and Asian Americans were not more likely (see Table 1). More specifically, odds ratios (ORs) indicated that relative to European American adolescents (9.2%), African Americans (OR = 1.41) were 41% more likely (12.5%) and Southeast Asians (OR = 1.97) were 97% more likely (16.9%) to report suicidal thoughts. Hispanic Americans (OR = 1.23) and Asian American (OR = 1.17), on the other hand, reported similar rates to European Americans (11% and 10.6%, respectively). Age was unrelated to suicidal thoughts (OR = 1.03; see Table 1), however, girls were significantly more likely than boys to indicate suicidal thoughts in the previous 30 days (OR = 1.29).

Table 1. Summary of Logistic Regression Analysis Predicting Suicidal Thoughts and Suicide Attempts

Predictor	Suicidal thoughts		Suicide attempts	
	Model I	Model II	Model I	Model II
	B	B	B	B
African American	.34 (.12)**	.51 (.18)**	.76 (.17)***	1.08 (.23)***
Hispanic American	.12 (.16)	.20 (.25)	.42 (.23) ⁺	.61 (.36) ⁺
Southeast Asian	.68 (.19)***	1.03 (.25)	.55 (.31) ⁺	1.19 (.36)**
Asian American	.16 (.19)	.29 (.27)	.35 (.27)	.34 (.47)
Gender	.25 (.07)**	.37 (.08)***	.12 (.12)	.38 (.13)**
Age	.03 (.02)	.11 (.04)**	.06 (.03) ⁺	.08 (.06)
Gender × Age		-.10 (.05)*		-.07 (.08)
AfAm × Gender		-.36 (.24)		-.64 (.33) ⁺
Hispanic × Gender		-.01 (.33)		-.38 (.48)
SE Asian × Gender		-.66 (.35) ⁺		-1.72 (.58)**
Asian × Gender		-.23 (.38)		-.10 (.58)
AfAm × Age		.14 (.13)		.08 (.14)
Hispanic × Age		-.10 (.16)		.17 (.20)
SE Asian × Age		-.02 (.16)		.14 (.26)
Asian × Age		-.33 (.20) ⁺		.24 (.21)
AfAm × Age × Gender		-.21 (.15)		-.04 (.20)
Hispanic × Age × Gender		-.06 (.20)		-.26 (.26)
SE Asian × Age × Gender		-.49 (.21)*		-.82 (.36)*
Asian × Age × Gender		.43 (.24) ⁺		-.17 (.30)

Note. Unstandardized regression coefficients are presented with standard errors in parentheses. Girls coded 1, boys coded 0. SE Asian = Southeast Asian, AfAm = African American.

⁺ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

A statistically significant Gender \times Age interaction suggested that, consistent with previous research, gender differences indicative of greater female suicidal thoughts are less pronounced among older adolescents. In addition, a significant Southeast Asian \times Gender \times Age interaction suggested that the gender differences in the European American group of adolescents (related to age) were not similar among the Southeast Asian group. That is, although risk for suicidal thoughts become similar when comparing older European American boys and girls (i.e., the main interaction effect), among Southeast Asians a gender difference indicative of *greater* incidence of suicidal thoughts among boys is evident, particularly among older respondents.

Findings related to indicating a suicide attempt in the past year suggested a higher rate among African Americans compared to European Americans, but no other significant differences (see Table 1). ORs suggested that suicide attempts were twice as likely for African Americans (OR = 2.14, 7%) compared to European Americans (3.4%) with comparable reports across European Americans and Southeast Asians (5.8%), Hispanic Americans (5%), and Asian Americans (4.7%). Age and gender were unrelated to suicide attempts (see Table 1). A statistically significant Southeast Asian \times Gender interaction, however, suggested that although European American girls were more likely to report a suicide attempt in the previous year than were European American boys, reports of suicide attempts among Southeast Asians were higher for boys than girls (see Tables 2 and 3). This latter finding was qualified by a significant three-way interaction, however, suggesting that greater suicide attempts among Southeast Asian boys (compared to girls) was limited to older respondents.

Table 2. Logistic Regression Analysis Predicting Suicidal Thoughts and Suicide Attempts by Age, Gender and Age by Gender Across Ethnic Groups

Predictors	European American		African American		Hispanic American		Southeast Asian		Asian American	
	Thoughts	Attempts	Thoughts	Attempts	Thoughts	Attempts	Thoughts	Attempts	Thoughts	Attempts
Gender	.37 (.08)**	.38 (.13)**	.01 (.23)	-.26 (.30)	.35 (.32)	-.00 (.46)	-.30 (.34)	-1.34 (.56)*	.14 (.37)	.28 (.57)
Age	.11 (.04)**	.08 (.06)	.25 (.12)*	.16 (.13)	.01 (.16)	.26 (.19)	.09 (.15)	.22 (.25)	-.22 (.19)	.32 (.21)
Gender \times Age	-.10 (.05)*	-.07 (.08)	-.30 (.15)*	-.11 (.19)	-.15 (.20)	-.33 (.24)	-.58 (.20)**	-.89 (.35)*	.33 (.24)	-.24 (.30)

Note. Unstandardized coefficients and standard errors are presented in parentheses. Girls coded 1, boys coded 0.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Means and 95% Confidence Intervals for Suicidal Thoughts and Suicide Attempts by Gender/Age Across Ethnicity

Ethnicity	African American	Hispanic American	Southeast Asian	Asian American	European American
Suicidal thoughts					
Boys	.1275 (.0936–.1714)	.0915 (.0591–.1391)	.1906 (.1240–.2816)	.1000 (.0605–.1608)	.0773 (.0690–.0866)
Girls	.1221 (.0932–.1585)	.1288 (.0913–.1786)	.1525 (.1009–.2239)	.1124 (.0708–.1740)	.1062 (.0975–.1155)
Younger adolescents	.1163 (.0871–.1536)	.1080 (.0764–.1505)	.2315 (.1628–.3182)	.1176 (.0697–.1915)	.0877 (.0797–.0964)
Older adolescents	.1315 (.0987–.1731)	.1119 (.0743–.1652)	.1312 (.0814–.2046)	.0964 (.0625–.1459)	.0956 (.0869–.1050)
Total	.1247 (.1016–.1521)	.1100 (.0840–.1427)	.1691 (.1255–.2241)	.1060 (.0755–.1468)	.0921 (.0860–.0985)
Suicide attempts					
Boys	.0796 (.0542–.1154)	.0508 (.0269–.0938)	.0924 (.0452–.1796)	.0454 (.0210–.0953)	.0279 (.0229–.0340)
Girls	.0608 (.0399–.0915)	.0501 (.0286–.0863)	.0325 (.0149–.0694)	.0500 (.0265–.0925)	.0399 (.0342–.0465)
Younger adolescents	.0621 (.0405–.0941)	.0415 (.0238–.0714)	.0670 (.0340–.1279)	.0256 (.0100–.0638)	.0322 (.0272–.0382)
Older adolescents	.0765 (.0524–.1103)	.0586 (.0321–.1045)	.0536 (.0231–.1193)	.0659 (.0367–.1153)	.0355 (.0300–.0420)
Total	.0700 (.0528–.0924)	.0503 (.0330–.0760)	.0587 (.0336–.1006)	.0476 (.0290–.0773)	.0340 (.0302–.0384)

Note. Younger adolescents included those aged 12–14, older adolescents were aged 15–17.

Table 4. Means and 95% Confidence Intervals for Suicidal Thoughts and Suicide Attempt by Gender and Age Across Ethnicity

Ethnicity	African American	Hispanic American	Southeast Asian	Asian American	European American
Suicidal thoughts					
Younger boys	.0902 (.0554–.1435)	.0687 (.0365–.1255)	.1932 (.1105–.3157)	.1335 (.0627–.2619)	.0677 (.0579–.0791)
Younger girls	.1405 (.0978–.1976)	.1529 (.1009–.2250)	.2618 (.1645–.3899)	.1033 (.0497–.2026)	.1056 (.0936–.1191)
Older boys	.1555 (.1051–.2239)	.1156 (.0636–.2011)	.1891 (.1013–.3253)	.0765 (.0410–.1382)	.0847 (.0725–.0989)
Older girls	.1060 (.0703–.1566)	.1086 (.0611–.1856)	.0871 (.0444–.1637)	.1215 (.0663–.2120)	.1066 (.0947–.1198)
Suicide attempts					
Younger boys	.0575 (.0297–.1084)	.0262 (.0092–.0720)	.0604 (.0198–.1699)	.0076 (.0010–.0533)	.0261 (.0198–.0342)
Younger girls	.0666 (.0379–.1146)	.0591 (.0306–.1110)	.0723 (.0303–.1630)	.0420 (.0147–.1145)	.0378 (.0303–.0470)
Older boys	.0960 (.0597–.1508)	.0766 (.0351–.1593)	.1127 (.0463–.2495)	.0722 (.0318–.1556)	.0293 (.0222–.0386)
Older girls	.0557 (.0296–.1023)	.0425 (.0164–.1056)	.0086 (.0021–.0353)	.0579 (.0260–.1241)	.0417 (.0337–.0515)

Note. Younger adolescents included those aged 12–14, older adolescents were aged 15–17.

Discussion

Findings from this study add to the literature on adolescent nonfatal suicidal behaviors by highlighting higher risk for both suicidal thoughts and attempts among African Americans and elevated suicidal thoughts among Southeast Asians. In contrast to previous studies, Hispanic American and Asian American adolescents did not report elevated nonfatal suicidal behaviors compared to the European American adolescents. Findings also suggested that gender differences, which typically suggest that girls report greater suicidal thoughts and attempts, do not necessarily generalize across ethnic groups.

A key strength associated with this study is the use of a large and diverse community sample of adolescents in Grades 7 through 12. The main implication of the findings is that researchers and intervention programmers need to increase their focus on suicide risk among African American and Southeast Asian adolescents. In addition, relying on overall national estimates or samples that are predominantly European American to generate estimates of nonfatal suicidal behaviors will obscure potentially important ethnic differences and possibly overestimate the extent to which girls are more at-risk than boys for nonfatal suicidal behaviors (i.e., the gender paradox may only apply to some ethnic groups).

Another key implication of these findings is the need for future research to focus on an apparent trend where African American adolescents are increasingly at-risk for thinking about and attempting suicide. Although earlier studies tended to find low rates of nonfatal suicidal behaviors among African Americans, present findings combined with other recent studies are suggesting an increased risk among this group (Joe & Marcus, 2003).

Findings of elevated risk among African Americans in this study may have questionable generalizability to African Americans across the United States; however, as this study is focused on a single county in a Midwestern state. African Americans residing in areas that are predominantly European American such as this county may experience greater hopelessness resulting from social and economic marginalization, elevated stressors associated with discrimination, and lowered educational or occupational opportunities. Such hopelessness, in turn, may manifest in relatively high rates of nonfatal suicidal behavior for this group (Joe & Marcus, 2003). In the county where these data were collected, African Americans experience relatively low socioeconomic standing and also social and economic marginalization. Prior to the 1980s, the African American population in this county was close to 1% of the population although from 1990 to 2004 the percentage of African Americans in the county rose from roughly 3% to 6%. Also, compared to European Americans, African Americans are relatively younger, more likely below the poverty line (36% vs. 3%), less likely to graduate from high school (54% vs. 83%), and more likely (four times) to be referred to juvenile corrections (Dane County Department of Human Services, 2003a). Consequently, these findings may point to a context in which particularly high risk for suicide may exist for African American adolescents. Future studies should consider regional and geographic variation in nonfatal suicidal behaviors among African American adolescents as local conditions and community or school-level factors may play a role in suicidal risk. Overall, however, present findings highlight elevated risk for suicidal thoughts and attempts for African Americans in this group and contradict the stereotype that contemplating suicide is a “White thing” (Griffin-Fennell & Williams, 2006).

Another key finding was that Southeast Asian adolescents reported the highest rate of suicidal thoughts. Few studies have included large samples of Southeast Asians in comparative studies related to adolescent mental health generally and, in particular, of suicidal thoughts and attempts. As a result, such a finding makes a significant contribution to the literature, supports arguments that Southeast Asians may be at elevated risk for negative mental health outcomes including

suicide-related behaviors (Hsu et al., 2004), and highlights the importance of separating Southeast Asians from broader groupings of adolescents who are of Asian panethnicity. Researchers should be careful to avoid generating estimates of suicidal risk that are based on Asian American panethnic samples as estimates may obscure important within-Asian variation among groups. In addition, school counselors and intervention specialists may need to recognize that local Asian populations vary in terms of their suicidal and mental health risk based on their specific ethnic group.

With respect to Southeast Asians, findings also suggested that boys, rather than girls tend to be at greater risk for nonfatal suicidal behaviors. Future studies are needed to explore more fully why boys may be at particularly high risk with one possible explanation related to cultural expectations for boys in some groups. Groups such as the Hmong expect men to carry on cultural traditions (administering weddings, funerals) but parents and family members provide less direct cultural socialization to boys compared to girls regarding gender-specific cultural roles (Supple et al., 2011). As they approach adulthood, boys may feel distance from the cultural group and less prepared to fulfill culturally prescribed roles, which may induce feelings of hopelessness, anxiety, and inadequacy. As with the African American sample, however, these findings have questionable generalizability to Southeast Asians across the United States. According to Census figures, this Southeast Asian sample was most likely comprised of students from Hmong families. Such a high proportion of Hmong was expected as Wisconsin has the third largest Hmong population in the United States (after California and Minnesota) and because the county where these data were collected experienced a 300% increase in its Hmong population from 1990 to 2000 (Karon, Long, & Veroff, 2003). As such, the current findings are likely more applicable to settings where local Southeast Asian groups have a large Hmong presence.

Findings related to Hispanic Americans contradicted studies from the early 1990s and 2000s (using the YRBS) by suggesting comparable rates of suicidal thoughts and attempts between this group and European Americans. One explanation for this discrepancy is that rates of nonfatal suicidal behaviors among Hispanic American adolescents have declined recently (Blum et al., 2000). An alternative explanation, however, may be that the adolescents in this study are primarily of Mexican descent and, thus, from a specific ethnic group that may be at lower risk for suicidal thoughts and attempts than other Hispanic American groups (Baca-Garcia et al., 2011; Oquendo et al., 2004). In addition, although Dane county represents an emerging immigrant community with a growing population of Hispanic Americans, the generalizability of these findings to other U.S. locations is questionable. A flaw of the current study is the inability to compare suicidal thoughts and attempts across Hispanic American subgroups.

Future research also should examine whether ethnic disparities in suicidal thoughts and attempts are mitigated by including statistical controls across a variety of contextual factors (family, schools, socioeconomics, coping styles). For example, some researchers posit that higher rates of suicidal thoughts, plans, and attempts may be due to differences in socioeconomics and the resulting stressors that ethnic minority adolescents disproportionately face (Roberts, Chen, &

Roberts, 1997). In addition, group-specific cultural factors such as familism, intergenerational acculturation gaps, ethnic identity, the role of spirituality, and variation in coping styles are possible explanations and should be considered as part of a conceptual model linking cultural stressors to adverse mental health outcomes among certain ethnic minority adolescents (Duarté-Vélez & Bernal, 2008; Utsey, Stanard, & Hook, 2008; Zayas & Pilat, 2008). Such factors were not considered in the current study as the goal was to ascertain whether rates of nonfatal suicidal behaviors (overall) varied by group prior to explaining why such discrepancies exist. An additional goal was to provide estimates comparable to national estimates from the YRBS, which do not include statistical controls.

Overall these findings point to a continued need to examine ethnic disparities in nonfatal suicidal behaviors among U.S. adolescents. More importantly, these findings point to African American and Southeast Asian adolescents as at particular risk in the location where this data collection took place. Given wide geographic variability in suicidal risk across the United States, local communities and schools need to collect their own data to understand risk in their local area. One possible recommendation to school counselors in certain areas of Wisconsin, for example, is to recognize that the gendered nature of suicidal risk varies across ethnicity (e.g., older Southeast Asian boys are at greater risk for nonfatal suicidal behaviors than Southeast Asian girls).

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