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Ethnic Differences in Adolescent Suicide in the United States

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Abstract

Suicide is the third-leading cause of death for adolescents between 15 and 24 years of age in the United States and its rate has been increasing. Factors that contribute to rate of, risks for, or protection against depression and suicide may be different for people from cultures with different values and health beliefs. Although typically seen as affecting Caucasians more than other groups in the U.S., the rates of suicide among African Americans, Latinos, and others have been increasing. 87 studies were reviewed looking at rates for suicide/suicidal ideation, risk factors for suicide, protective factors/coping mechanisms, service delivery/barriers to care, and specific treatment or management of suicidal thoughts for adolescents from different ethnic groups in the U.S. The following ethnic groups in the U.S. were compared: African American, Latino, Asian American, Native American/Alaskan Native, and Hawaiian American. Although studies report conflicting rates, most studies still show an overall higher risk for suicidal behavior among Caucasian youth than any other group. Rates for suicidal behavior are growing for African American teens (perhaps more in boys), Latino teens (especially Latina girls), Asian American youth, Native American youth, Alaskan Native youth, and Hawaiian American youth. Details about these differences are discussed along with recommendations for clinicians working with youth at risk for suicide from minority cultures in the U.S.

Keywords

Adolescent; culture; depression; ethnicity; suicide; United States

Introduction

The United States has experienced great changes in ethnic mix over the past 20 years and the growing diversity in the population needs to be considered when talking about suicide in the U.S. (1). Factors that contribute to risks for or protection against depression and suicide may be different for cultures with different values and health beliefs. Although typically seen as affecting Caucasians more than other groups in the U.S., the rates of suicidal behavior among African Americans and Latinos, among others, have been increasing (2,3). Understanding the reasons for this change and how to treat people from non-majority ethnic groups is a growing need in healthcare.

Some definitions may be helpful in understanding the issues. Culture can be defined as a pattern of human behavior that includes customs, communication, beliefs, values, and views about life in a religious, ethnic, or social group (4). Many cultural groups fall under the categories of

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ethnicity, religion, sexual orientation, and other social groupings. Ethnicity, specifically considered in this paper, usually implies a geographic origin and can be defined as an individual's sense of belonging to a group of people sharing a common origin and history.

Cultural competence includes sensitivity toward diverse groups and awareness of factors that impact on minority groups and immigrants like: the stress of migration, acculturation, history, poverty, language barriers, discrimination, prohibitions, values, beliefs, and spirituality that can affect health care. In order to provide the best care to people from minority groups, it is important to understand basic concepts about different cultures such as how illness is defined in that culture, the specific values and beliefs that influence understanding of illness, family connections, and social networks, and how to build a therapeutic alliance with someone from a different culture.

There is a great deal of data about general lifetime rates and risk factors for suicidal thoughts, plans, attempts, and completion. Data from the National Comorbidity Survey, 1999 showed that in the U.S., the prevalence of suicide ideation is 13.5%, for plan is 3.9%, for attempt is 4.6%, and, of the attempters, 39% reported it was a serious attempt [5]. Females were more likely to have suicidal thoughts (OR 1.7) and more than twice as likely to attempt suicide (OR 2.2) compared to males (5). They found that having any DSM III-R disorder, especially mood disorder, Post Traumatic Stress Disorder (PTSD), non-affective psychosis, substance abuse disorder, antisocial personality disorder, female gender, and being a non-student with 12 or fewer years of education increased the odds of attempting suicide [5]. Analysis of coroner data in a major city between 1998 and 2001 found that the suicide rate was 14.8 per 100,000 (6). This data showed that about half of those people who committed suicide had a mental illness and 26% had history of substance abuse. The leading risk factors were age, psychosocial stressors, poor health, and access to firearms (6). Studies looking at methods of suicide for adults across ethnicities show that Latinos were more likely than other groups to use firearms, implementing them in 1.8% of suicides, while Asian American and Native Americans were less likely to use firearms, in only 0.6% (7).

Use of firearms in completed suicide has increased across ethnic groups, including African Americans and Latinos. Men are more likely to use more violent means of suicide and although women are more likely to use poisons for suicide, firearm use by women is also increasing [8]. Asian Americans (Chinese and Japanese Americans) were more likely to use hanging as a method of suicide, though again it was found that firearm use was increasing (8). It is unclear if the same patterns exist in adolescents.

Genetic studies show that there are genetic factors involved in the etiology of suicidal thoughts and behavior. In fact, multiple genes may play a role. The serotonergic system has shown the most evidence, but there is new evidence also implicating the noradrenergic and dopaminergic systems (9). A study by Thalmeier showed that genes involved in cell proliferation, development of the CNS, cell-cell communication, and signal transduction may play a specific role in suicidal behavior (10).

Focusing on adolescence in particular, since 1999, suicide has been considered the third-leading cause of death for people between the ages of 15 and 24 in the U.S. (1). According to the National Comorbidity Survey, if lethality is ignored, the highest risks for suicidal ideation, plans, and attempts are in the late teens and early twenties (5). From 1900 to 1955, the suicide rate for 15-24 year-olds was about half that for the combined rate for all U.S. age groups. Between the mid-1950s and 1980, however, the rate almost tripled (11). The CDC, as quoted in Bechtold, reported that this increase in suicide rate among U.S. adolescents has coincided with an overall reduction in suicide rates in people older than 30 years of age, making the adolescent increase even more noteworthy and concerning (11,12).

There have been multiple studies examining motivations, risk factors, protective factors, and treatments for depression and suicide in American youth. There is also growing research looking at how suicide differs across cultures in the U.S. and internationally. This paper will examine factors influencing suicide and suicidal ideation in adolescents from various ethnic groups in the U.S. in an attempt to further the understanding of how to prevent suicide across cultures.

This paper will not examine suicide thoughts or behaviors in non-ethnic cultural groups, nor ethnic groups outside the U.S. Comparisons will be made only for broader ethnic groups in the U.S.

Methods

A search was made on PubMed, MEDLINE, CINAHL, and Medscape between the years 1975 and 2007. It was anticipated that the literature prior to 20 years ago would be sparse and less relevant to the clinical work of today. Only papers published in English were collected. Studies examining suicide internationally were excluded.

Articles were categorized according to the ethnic group examined: general study on ethnicity and suicide, or studies specifically on African American, Asian, Caucasian, Latino, Native American, and/or Native Hawaiian youth. These groupings were selected since most studies established comparisons based on such delineations. Where more than one group was compared, the article was considered for each group. It was decided to focus on these groups in this overview as most studies grouped subjects according to these general racial groups. Where studies looked at specific Latino groups (i.e., Mexican, Argentinean, etc.), the article was considered for Latino subjects in general.

Studies were then grouped according to whether they examined general rates, risk factors, protective factors/coping mechanisms, use of mental health services, or treatments for depression and suicide in youth in America.

A total of 87 articles were reviewed that looked at suicidal behavior in youth from minority groups in the U.S. The following search words were used: Adolescent, culture, depression, ethnicity, suicide, United States, children.

Results

87 studies were reviewed. Most studies compared African American, Latino, Native American, and Caucasian subjects and a few studied Asian American and Native Hawaiian subjects. 14 studies looked at general rates, risks, and treatments for suicide/suicidal ideation across cultures. 43 studies examined risk factors for suicide and 12 examined protective factors/coping mechanisms. 9 studies looked at service delivery/barriers to care or treatment/management of suicidality for any ethnic group.

Of the 17 articles studying African Americans, 14 were surveys, 1 was a chart review, one was a literature review, one looked at mortality data, one was a book, and one was a case controlled study. Of the 26 articles studying Latinos, 19 were surveys, four looked at mortality data, and three were a literature reviews. Of the 12 articles studying Asian Americans, 8 were surveys, one was a literature review, one interviewed subjects using DSM criteria, one was a case-control study, and one was a medical record review. Of the 25 articles looking at Native Americans/Alaskan Natives, 16 were surveys, three reviewed mortality data, two were case studies, three were literature reviews, and one was participatory action research. There were three articles that studied Native Hawaiians and all were done by survey. There were 9 articles

about ethnicity and suicidal behavior in youth in general and of those, two were reviews, one was a chapter, and six were surveys.

General Studies of Adolescents and Suicide in the US

Data from the National Comorbidity Survey, 1999 showed that of the 5,877 respondents aged 15-54 years, 13.5% reported lifetime suicidal ideation, 3.9% plan, and 4.6% attempt (5). A large study in Boston found from reports of students that 20% of Boston Public high school students were frequently depressed, 20% had suicidal thoughts at one time, and 10% actually attempted suicide (13). In that study, males were more likely to complete suicide, but females were twice as likely to attempt suicide (13). Another study by Roberts et al. in 1997 similarly found that suicidal thoughts in adolescents from a lower status group were more prevalent for older females, but it was older males who made more attempts (14).

National mortality data has been used to look at methods of suicide used by adolescents in the US. A study by Shepherd and Klein-Schwartz in 1998 researched the epidemiology of poisoning deaths by adolescents in the U.S. and found that, although most poisoning victims were Caucasian males, females were most likely to use poisoning as a means of suicide and the death rate was highest in 15-19 year-olds (15). Younger adolescents (10-14 year-olds) appear to use drugs other than alcohol to commit suicide and inhalants seem to be used more by older adolescents (15-19 year-olds) in suicides and accidental deaths (16). Another study found that the most common method of suicide for adolescents is by firearms and the increases in suicide rate in adolescents attributable to firearms far exceeds increases attributable to any other method of suicide (17).

General risk factors for suicide attempts and suicidal thoughts in adolescents include depression, drug/alcohol use, family history and friends' history of suicide attempt, female gender, lower education, school dropout, lower socioeconomic status, history of environmental stress, history of sexual abuse/physical abuse, and parental conflict (18). One study analyzed data from the CDC National Youth Risk Behavior Survey in 2001 and found that ethnicity, gender, being offered drugs at school, and being abused by a boyfriend/girlfriend were risk factors (19). Other studies have found that similar risks including mood disorders, prior suicide attempts, social alienation, substance abuse, and family hardships contribute to adolescent suicide (20). Another study looked at differences between male and female adolescents and found that "daily hassles and negative life events" were related to suicidal ideation in males, but depression and low social support were related to suicidal ideation in females (21). Alcohol and drug use is a significant risk factor across cultures for U.S. adolescent suicide (22). Alcohol use has been reported to make adolescent females 3 times more likely and males 17 times more likely to attempt suicide (23). A small study of more affluent youth found that suicide attempts and suicide completion were likely to occur around holidays and attempts peaked at the end of the school year (24).

Post Traumatic Stress Disorder (PTSD) has also been shown to be a significant risk factor for suicide ideation and possibly attempts in adolescents (25). Children from low-income backgrounds are at particular risk and rates as high as 14.5% for suicidal ideation have been reported in children starting at 9-10 years (26). In that study, suicidal ideation was associated with past experience of violence, symptoms of distress in response to exposure to violence, as well as depression (26). Another study showed that disaster related stress, like exposure to hurricanes, can also increase risk of suicidal thoughts in adolescents (27).

In further considering the demographics and risks of adolescent suicide, there are several variables that should be considered: gender, early versus later pubescence, geographic area, socioeconomic status, and ethnicity. Regarding gender, suicide rates in the U.S. for adolescent boys are about 5 times higher than those for adolescent girls (11,28). This male predominance

may not be the same when ethnicity is considered, however. Regarding age, completed suicide is less common prior to the age of 12 years and is most common during the early 20s (11,28). Regarding geography, suicide in adolescents seems to be higher in western states, including Alaska (11).

Rew (18) studied 10,059 students from the 7th, 9th, and 11th grades in Connecticut and compared Caucasian, African American, and Latino students. She found that stress, physical and sexual abuse, family and friend attempted suicide, "internalizing and externalizing behaviors," reduced social connectedness and religiosity were associated with suicide attempt.

Many adolescents with depression and even suicidal thoughts do not pursue treatment. A study by Pirkis showed that less than one-third of all adolescents who seriously considered suicide received counseling (29). Logistic regression showed that those who were more likely to get counseling were female, 13 years old or younger, depressed, had made a previous attempt, and/or had a physical exam in the last year (29).

One method of suicide prevention is identification of those at higher risk and attempting to minimize those factors that contribute to that increased risk. Research has shown that reducing access to means of suicide can significantly reduce the risk (28). Limitation of access to alcohol and drugs, as well as access to firearms, may have a positive impact on youth suicide. Recognizing those communities where access to firearms and access to illicit substances is more prevalent could help to target more vulnerable youth. Treating psychiatric disorders that are common to those attempting/completing suicide is also important. In particular, treating affective disorders and substance abuse disorders, common in adolescents, could thus reduce rates of suicide. Encouraging other behaviors, like engaging in physical activity, may also be beneficial. Another study found that adolescents, both Caucasian and Latino, who engaged more in physical activity (i.e.: physical education class) were less likely to report feeling sad, having suicidal thoughts, and making suicide plans (30).

One treatment method used to address the problem of adolescent suicide is the Signs of Suicide program. This is a school-based program that combines psychoeducation with a curriculum that helps raise awareness of suicide and contributing factors with a brief screening tool for depression and suicidal behavior (31). Asteline and DeMartino studied the program in 2004 and found that the SOS program resulted in the adolescents having greater knowledge about depression and suicide and have a lower likelihood of making a suicide attempt (31). When gender was examined, girls were more likely to have suicidal thoughts and attempt suicide in the last three months, but have greater knowledge about depression and suicide, be more likely to intervene on behalf of friends, and be more likely to seek help (31).

African American Adolescents and Suicide

Suicide has typically been seen as something that affects Caucasians more than other groups in the U.S., but the rate of suicide among African Americans has been increasing (2). In 1999, the National Comorbidity Survey for lifetime suicide attempts found that African Americans, compared with Caucasian Americans, were somewhat less at risk, with an odds ratio of 0.6 for suicidal thoughts, 0.7 for suicide attempt, 0.7 for suicide plan/planned attempt, and 0.8 for impulsive attempt without a plan (5). Data from the CDC, as well as a study by Roberts et al. (32), found similar results. Considering African American adults, data from the National Survey of American Life was used to examine the prevalence of suicidal thoughts and attempts for African Americans across the lifetime (3). They found that the prevalence of suicidal ideation was 11.7% and the prevalence of suicide attempt was 4.1% for African Americans. When data from specific ethnic/gender subgroups were looked at, Caribbean men had the highest rates of attempts (3). Interestingly, this study found that risk factors for attempts were youth, having one or more DSM-IV disorder, residing in the Midwest, and being less educated

(3). African American women have specific risk factors, and one study reported these to include "psychological distress," substance abuse, PTSD, relationship difficulties, poor social support, childhood abuse, and abuse by her partner (33).

Roberts studied data taken from Teen Health 2000 with 4,175 adolescents aged 11-17 years looking at lifetime attempts, thoughts, and plans found similar results (32). Most of the literature indicates a lower risk for suicide attempts in general, as well as past year attempts, for African American youth compared with Caucasian youth (32). The exception may be a study with young African American males, which found that they were as likely as young Caucasian males to commit suicide (32).

African American youth often grow up in economically disadvantaged neighborhoods in the U.S. with higher prevalence of poverty, discrimination, high school dropout, teen pregnancy, and single parent households. These stresses may contribute to the prevalence of depression and suicide. One study found that parental conflict made African American adolescents 6.4 times more likely to attempt suicide (23). Depression, behavior disorders, and drug and alcohol use are also risk factors for suicide attempt and suicidal thoughts in this group (34). Lower levels of family cohesion and adaptability were also found to be linked to an increased rate for suicide attempt in low-income African American adults (35), but it is unclear if this is also the case with youth. Alcohol is a major risk factor for suicide across cultures, although it is Caucasian adolescents who have been more likely to have used alcohol before they commit suicide (23). Depression is a major risk factor for African American adolescents as well, and depression in African American adolescent females has been found to be associated with an even greater risk of suicide compared with males in this group (23).

African American adolescent males appear to commit suicide more frequently than females (36,37). Attempts have been made to understand the higher rate for suicide in young African American males and an article by Willis et al. (36) has theorized that "postmodernity loosens the bonds between the individual and society, thereby increasing the vulnerability to depression, related pathologies (such as substance abuse), and suicide." They and others argue that young African American males are more exposed to such stresses and the usual social institutions that provide support in the African American culture have been unable to be as effective in maintaining that support currently (36,37). A study by Vega (38) looking at suicidal behavior in Latino, African American, and Caucasian boys found that low self esteem, depressive symptoms, and belittling by teachers and parents were higher for African American and Latino boys. Interestingly, deviancy-delinquency was higher for Caucasian boys (38).

There are well-documented problems with underdiagnosis of depression in African Americans in general, but it is unclear how much this plays a role in adolescent suicide in this population. A study by Kung et al. compared 22,957 deceased adolescents from the 1993 U.S. National Mortality Followback Survey and found that suicide in Caucasian adolescents was associated with depression, marijuana abuse, heavy drinking, use of mental health services, and firearm use; on the other hand, suicide in African American adolescents was associated only with marijuana use, use of mental health services, and firearm availability (39). Diagnosis of depression was not found to be correlated. It is unclear what role the well-known underdiagnosis of depression in African Americans plays in this finding.

The literature has attempted to identify protective factors for African Americans that may contribute to the overall lower risk of suicide. Harris and Molock found that strong family support and family cohesion were related to fewer episodes of depression and suicidal thoughts in African American college students (40). Wingate et al. argues that living in the South is the protective factor to suicidal ideation (41).

Some studies indicate that minorities like African Americans are protected from suicide as a result of social factors including links to the church, close social ties, and family cohesion (42-44). It has been suggested that religion has an impact as a protective factor because involvement in the church "encourages social connection, self esteem, and may provide meaning to one's life" (44-46). Studies have shown that it is personal devotion and orthodox religious beliefs that are strong protective factors and that these are protective for both African Americans and Caucasians (47,48). It was corroborated by Walker and Bishop that religiosity was related to lower suicidal thoughts for both African American and Caucasian college students (49). Yet another study found that reduction in suicidal behavior is associated with religious coping; this association was prevalent only when also associated with decreased fatalism (50). Morrison and Downey found that black college students reported significantly more reasons for living and had higher scores for moral objections to suicide than Caucasians, suggesting that religiosity may decrease suicidal behavior (51). Another study sites protective factors of spirituality, hope, support from family and friends, self efficacy, coping ability, and effectiveness of obtaining resources (52).

It is important to consider how racial disparities influence treatment of psychiatric disorders in minority groups. A study of mental health service use found that African American adolescents were 65% as likely to report the use of mental health treatment when experiencing suicidal thoughts (53). The study by Asteline and DeMartino (31) on the use of SOS program in schools also compared how students responded to the SOS program according to ethnicity. Caucasian students were more knowledgeable about suicide and depression, but African American students were less likely to have suicidal thoughts and attempts and less likely to get help compared with Caucasian and Latino youth (31). The question of how to increase the low rate of African American youth receiving psychiatric treatment for suicidal thoughts remains largely unanswered in the literature.

Latino Adolescents and Suicide

In 1999, the National Comorbidity Survey for lifetime suicide attempts found that Hispanic Americans, compared with Caucasian Americans, had higher risk for suicidal thoughts, plan, and impulsive attempt (odds ratio of 1.2 for suicidal thoughts, 1.2 for suicide plan, and 1.7 for impulsive attempt without plan), though risk was not elevated for general suicide attempt or planned attempt (0.9 for suicide attempt, 1 for planned attempt) (5). Roberts et al. found no difference between Caucasians and Mexican Americans on lifetime attempts or on suicidal thoughts, plans, or attempts in the past year (32). One of the limitations to this study, however, is that they did not control for suicide intent or for lethality of attempt (32). Controlling for intent and lethality of attempt may dramatically lower estimates of the prevalence of suicide attempts. Information about severity and lethality varies from study to study, which may account for the different rates.

Latino adolescents may have different rates than Latino adults, although there is some difference of opinion about risk for Latino adolescents in the U.S. Another study compared suicide rates between Latino and Caucasian adolescents and found that the suicide rate was 9.0/100,000 for Latinos and 11.9/100,000 for Caucasians (54). The Vega study (38) looking at suicidal behavior in Latino, African American, and Caucasian boys found that Latino boys had a 7.8% higher rate of suicide attempt than the other groups. Another study (55) looked at 1,786 high school students and found no significant difference in suicide plans or attempts in the past year between Latinos and Caucasian Americans. Another issue is that Latinos often express mood symptoms differently, usually expressing them as somatic complaints. Thus, identifying at risk patients may be more challenging.

Suicide rates may be greater depending on gender for Latin American youth. One study with 10,059 students from 7th, 9th, and 11th grades in Connecticut found that suicide attempts were

higher among Hispanic Latina girls (19.3%) compared to Latino boys, all Caucasian adolescents, and all African American adolescents (18). The reasons for this are unclear. This is corroborated, however, by a study in 2005 with data from the CDC which found that 14.9% of Hispanic female adolescents attempted suicide compared with 9.3% of Caucasian female youth and 9.8% of African American female youth (19). Razin et al. (56) found that Latino adolescent girls who attempted suicide had poorer school performance, suffered early losses (like that of their biological fathers), and the attempt was often precipitated by interpersonal conflicts with mother or boyfriend. Their mothers tended to have a more tumultuous relationship with their daughters, have made suicide attempts themselves in the past, be less likely to be born in the U.S., rely more on public assistance, and be less medically healthy (56). Rew found significant relationships between recent suicide attempts and environmental stress, history of sexual abuse, history of physical abuse, family history of suicide attempt, and friend's history of suicide attempt for this group (18). One study found different results, however, when they looked at 3,310 12-19 year olds and found that, although Latina teens had higher rates of alcohol use and depression than their peers, there were no differences in risk for suicidal behaviors in female youth comparing Caucasian, Latina, and African American female groups (57).

Attempts have been made to understand the reason for the possible increased risk for Latina girls. Zayas found that the process of acculturation might be related to the higher risk (16). According to Zayas' research, the increased risk for suicide attempt in Latina girls may be related to the traditional gender roles for girls in that culture, ethnic identity, and resulting adolescent-parental conflict (16). In traditional Latino culture, girls are expected to conform to the female gender role of not expressing anger, fulfilling multiple obligations to parents and the family (16). However, the cultural expectations of how these girls would also resolve the additional normal adolescent struggles of dating, sexuality, and peer pressure and how this would differ from other teens in the U.S. culture may add to their stress (16).

Regarding method, Razin et al. (56) found that Latino adolescents who attempted suicide were more likely to do it in an impulsive and non-lethal way, and to attempt by overdose.

As discussed for African American youth, Latino youth also commonly grow up in economically disadvantaged neighborhoods in the U.S. This is a major contributor to several factors that affect many economically disadvantaged groups like poverty, discrimination, high school dropout, teen pregnancy, and single parent households. These stresses, in addition to unique stresses for immigrants, like the stress of acculturation, may contribute to risks for depression and suicide in particular for Latino youth (38). Depressive symptoms, family problems, low acculturation, and problems with other coping have been related to suicidal ideation in Latino adolescents (58,59).

According to Canino a "fatalistic worldview and passive coping style" have been found to be more prevalent in groups from lower socioeconomic levels (2,60). She goes on to say that depression and suicidal behavior is related to the Mexican cultural tendency towards a passive coping style and fatalism (external control) (2,60). This belief in external control may weaken other coping styles (2).. However, adolescents in Mexico do not have as high rate of suicide as Mexican American adolescents (11.5% vs. 23.4%) (61,62). This suggests that there are multiple factors that contribute to the differences in suicide rates among Caucasians and Mexican Americans. How SES, education, acculturation, and culture combine in this population needs to be further evaluated.

Protective factors would include factors that specifically decrease risks described above. Effective acculturation may be a protective factor to depression and suicide. Effective acculturation depends on how an individual melds their culture of origin with the new culture

and this can include both pride in their culture of origin while still incorporating positive and useful aspects of the new culture. Another study found that a strong ethnic affiliation and pride is associated with less drug use (63). Although not directly tested, this may also impact suicidal behavior. Another study looking at acculturation found that speaking English was associated with lower rates of depression and suicidal thoughts in a group of Latino youth (64). As with African American youth, religion is a protective factor for Latino youth. It was found that the influence of religion, church attendance, and religiosity were protective factors against suicidal ideation for Latinos (65).

A study of mental health service use found that when experiencing suicidal thoughts, Latino adolescents were 55% as likely to report the use of mental health treatment compared with Caucasians (53). Treatment for Latino adolescents should take into account the differences in language, values, health beliefs, and attitudes about mental health and suicide particular to the Latino culture. A study by Heiman et al. showed that having an outpatient mental health clinic located within the Mexican-American community with an informal atmosphere, minimal administrative procedures, bilingual and bicultural staff, focus on preventative care, and publicity that minimizes the stigma of mental illness were effective measures for engagement and treatment of this population (66).

Asian Adolescents and Suicide

Data is sparse for Asian Americans and suicide, although there is more about suicide in Asians outside the U.S. A study by Hesketh (67) on Chinese adolescent suicide in China found that, of the 1,576 middle school children surveyed, 16% reported suicidal ideation, 9% reported a suicide attempt, and about 33% reported severe depression. Risk factors included female gender, poor academic performance, depression, and rural residence (67). It is unclear if similar rates and risks would be found in Chinese adolescents in the U.S. Some studies have attempted to look at this.

Available U.S. studies show that Asian Americans are less likely than Caucasians to seek mental health treatment (68). Identifying Asian people, adolescents in particular, with mood disorders may be better done in primary care settings as Asians often express depressive and anxiety disorders in somatic ways. A study looking at rates of depression in primary care found that the prevalence of MDD among Chinese Americans was 19.6% and this is comparable to prevalence of depression in Caucasians (69). As for Asian adolescents, Choi et al. studied Korean youth aged 11-13 years and found that there was significant correlation between depression and somatic symptoms (70). Another study, however, postulated that Asian Americans, specifically Chinese American adolescents, have lower rates of depression and suicide than Caucasian adolescents because cultural factors contribute to immunity to depression in this group (71). Further work on prevalence of mood disorders and suicidal behavior is needed in this group.

Stresses seen in other minority immigrants like acculturation, alienation, discrimination, acculturation gap between the child and parents, and identity confusion may also contribute to risks in this group (72). Lau et al. (72) studied 285 youth ages 4-17 years, who received outpatient mental health care at the Asian Pacific Family Center in California. They found that older age, lower acculturation, and parent-child conflict were associated with increased risk of suicide (72). The article by Lau et al. studied whether suicide in Asian American youth was related to difficulties with acculturation like alienation, discrimination, and identity confusion, and intergenerational conflicts when parents disapproved of how the children adopted U.S. cultural norms (72). They found risk factors were the same for males and females and included depression, age (older youth), and parental conflicts (72). Importantly, they found that there was a relationship between lower acculturation with parent-child conflict and suicide behavior risk for these youth (72). They believed that these youth may have more collectivist/family-

harmony values that make them more at risk (72). Others corroborate that risk factors like depression and parental conflicts increase the risk for suicidal behavior in Asian-American youth (23). Others have found that depression with hopelessness is a major cognitive factor affecting suicidal ideation for male and female Asian international students in the U.S. (73). A number of studies have shown relationship between poor academic performance in addition to parent-child conflict as major risk factors specific for Asian American youth (74). Depression may also be more likely diagnosed in Asian girls than boys (68), but there are limited studies looking at this.

Coping mechanisms for depression may be different for Asian Americans than for Caucasian Americans. A study with Korean and Filipino Americans found that they appraised stressors as more challenging than Caucasians, but were more likely to use coping skills like religious coping, problem-solving, distancing, escape-avoidance, and accepting responsibility (75). A study by Zhang in 1996 compared US and Chinese college students and found that religiosity and family cohesion are protective against suicidal thoughts (76).

Asian Americans are much less likely than Caucasians to use mental health services and multiple factors may contribute to this. Asian youth have been found to be the least likely to receive counseling for suicidal thoughts (29). Patient factors such as cultural view of mental illness, stigma of having a mental illness, and the appropriate management of emotional stresses, clinician factors such as understanding how to engage and treat people from this group, as well as system factors such as access to care may contribute to this lower likelihood for Asian Americans to get help. Screening for depression and suicide in a primary care center may be an effective way to reduce risk for suicidal thoughts and behaviors for Asian American youth. Reducing stigma may be more easily accomplished in this setting and provide a better opportunity to treat depression, a major risk factor for suicide. Another useful venue may be school-based screening and treatment as difficulties in school performance have repeatedly been shown to be related to suicide in Asian youth in particular.

Native American/Alaskan Native Adolescents and Suicide

Suicidal behavior among Native Americans/Alaskan Natives(AI/AN) is growing, though studies vary greatly as to the rates of suicide. Some studies report rates as high as 20 times the national average and some report rates below the national average (11). The increased rate may prove especially true for adolescents aged 15-24 years of age, however (11,77,78). The 1988 Indian Health Service Adolescent Health Survey found that 15% of children in grades 6-12 reported making a suicide attempt and over 50% of those made multiple attempts (79). The national trend across cultures in the U.S. for male preponderance for suicide is higher in Native Americans (11,77). A study looking at fatal injuries across ethnic groups in the U.S. found that Native Americans/Alaskan Natives between the ages of 10 and 19 years had higher rates of fatal injuries, suicide, and motor vehicle deaths (78). Reasons for this are unclear. “Suicide clustering” (also called “suicide contagion”), higher in adolescents as a whole, is also a significant factor to consider in the Native American adolescent population (11). Bechtold described a cluster of nine adolescent males from a single tribe who committed suicide within seven weeks of each other (11). All were committed by hanging. This “contagious” behavior may be more prevalent in small, relatively closed communities like Native American reservations (11).

Risk factors for suicide in Native American adolescents have been reported to be female gender, history of mental health problems, weekly consumption of hard liquor, having a family history of or friend who attempted suicide, a history of physical or sexual abuse, alienation from family and community, and poor self-perception of health (79). Other studies corroborate that substance abuse (prevalence of 9% in Native American adolescents vs. 3.8% of Caucasian adolescents) is associated with suicide in American Indian youth (80). Because of the increased

prevalence of substance abuse in Native American youth, this may be an even more important risk factor to consider for them. They also found that poverty, unemployment, welfare dependency, family adversity, and family/parental deviance (i.e., parental violence) were also associated with suicide behavior (80). Another study by Novins et al. (81) cites that risk factors for suicidal thoughts and behaviors also include psychiatric illness, antisocial behavior, substance abuse, parental conflicts, family history of attempted suicide, friend attempting suicide, father not living at home, loss of cultural supports, and weak ethnic identity. They hypothesized that risk would differ across tribes. They found that for Pueblo youth, a more closely knit tribe, risk factors most associated with suicidal thoughts/behaviors were depressed affect, friend attempted suicide, and lower social support (81). For the Southwest tribe, also with strong family and community ties, risk factors of antisocial behavior, father not living at home, and stressful life events correlated most with suicidal thoughts/behavior (82). This tribe has strong cultural prohibitions about suicide or even thinking about death so the youth with suicidal behavior were thought to be quite outside the cultural norm (81). The Northern Plains tribe, who emphasize individualistic values, had risk factors of depression and low self-esteem (81).

There has not been much research on protective factors for Native Americans/Alaskan Natives. One study found that protective factors against suicidal thoughts for this group of adolescents were positive school experience, caring family relationships, and supportive tribal leaders (82). Another by Garroutte found that a commitment to cultural spirituality was a specific protective factor (83).

Treatment that focuses on reducing risk factors like substance abuse and access to fire arms, that treats mood/anxiety and antisocial behavior disorders in a culturally informed way, and that comprehensively tries addresses poverty, family disruption, and limited access to care, is imperative for Native American youth. Treatment that is culturally informed has been attempted and Gary et al. (82) found that culturally competent clinicians who address the issues of limited access to care, poverty, family conflicts, and school failure can be most effective with engaging Native American adolescents. Interventions involving school and family as well as community elders and minimizing media coverage of suicide may also be advisable (11).

Native Hawaiian Adolescents and Suicide

There has been a significant increase in suicide attempts in Hawaiians in recent years (84). 3,094 high school students in Hawaii were surveyed by Yuen et al. in 2000 and it was found that the rate of suicide attempts for Hawaiian youth was 12.9% whereas the rate for non-Hawaiians was 9.6% (85).

Risk factors for attempting suicide were also studied by Yuen et al. They found that predictors of suicide attempts for Hawaiian youth included Hawaiian cultural affiliation, depression, substance abuse, educational level, and “main wage earner’s” educational level (85). Predictors of suicide attempts for non-Hawaiians included depression, aggression, and substance abuse (85). Another study by Nishimura et al. corroborated that substance abuse was a major risk factor for Hawaiian teens for suicidal ideation, plans, and attempts (86).

The study by Nishimura et al. (86) looked at a school based program to help decrease substance abuse, a major risk factor in Hawaiian adolescent suicidal behaviors. They used school and community based programs to teach adolescents about the consequences of alcohol use. This program was found to be helpful in addressing alcohol use and thus suicidal behaviors.

Limitations

Some of the limitations of the current research are that the definition of suicide versus suicidal thoughts or attempts is not adequately delineated. The literature often groups together many ethnic groups in broader categories like “Latino” and “Asian” and “Caucasian” when these groups are made up of quite different populations. Another limitation is that culture is not uniform so that people labeled as being from the same ethnic group like “African American” may be quite diverse. Additionally, there is very little research about what is specific to the various cultures that influences not just suicide rates, but methods, risks, protective factors, and intrapsychic processes that contribute to suicidal behavior.

Discussion

It is difficult to identify effects from culture specifically versus effects from more general factors like socioeconomic level, education, acculturation, and geographic location (urban vs. rural, western states vs. eastern). A deeper understanding of specific cultural values and health beliefs may be the key to disentangling this problem. Until more definitive research is available, consulting knowledgeable colleagues about how to provide culturally sensitive care is important.

Addressing risk factors is the first step to decreasing suicide in minority youth. Similar risk factors across ethnicities include mood and anxiety disorders, substance abuse disorders, lower socioeconomic and educational level, access to firearms, and family stresses. There are differences in prevalence and impact of some of these risk factors and in how to address them for each ethnic group in a culturally informed way. Risk factors that differ across ethnic groups include perhaps increased risk for African American and Latino adolescents from single parent households, possibly more of an impact from parent-child conflicts for Asian American and Native American adolescents, likely greater impact of poor school performance for Asian American adolescents, and perhaps a greater impact of friend suicide for Native American adolescents.

Identifying protective factors may be equally important in reducing suicide across ethnicities for adolescents. In general, involving family, and important figures like spiritual leaders, extended family, and teachers can be quite helpful. For African Americans, Latinos, and Native Americans, spirituality and religiosity are important protective factors that may be enhanced by encouraging support and collaboration between mental health providers and spiritual leaders. For Asian Americans, addressing the strong family and community bonds and the value placed on education by including the family in treatment may be beneficial.

Understanding the health beliefs held by each ethnic group is also important in planning treatment. Keeping in mind that mental illness may be manifested by somatic complaints is important to consider for Latino and Asian adolescents. Understanding the stigma placed on calling something a psychiatric disorder is important for all groups discussed, especially for Asian Americans.

Conclusion

Culture guides human thought, emotion, values, health beliefs, social and family interactions, and provides mechanisms for dealing with major life challenges, including illnesses (87). Finding ways to help adolescents from different ethnic groups to develop effective coping strategies to stressful life situations that take into consideration the values and coping strategies of their community at large is important to the treatment of psychiatric disorders in minority groups. There is a need for increased awareness in schools and in psychiatric and primary care settings of the needs of those from minority groups. Consulting teachers and clinicians who

are also from the specific minority group can be quite useful. There is also a need to have a willingness to collaborate with community supports that are important to patients from minority backgrounds like religious leaders and family members.

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References

1. Gutierrez PM, Rodriguez PJ, Garcia P. Suicide risk factors for young adults: testing a model across ethnicities. Death Stud 2001;25(4):319–40. [PubMed: 11803983]
2. Canino G, Roberts RE. Suicidal behavior among Latino youth. Suicide Life Threat Behav 2001;31 (Suppl):122–31. [PubMed: 11326756]
3. Joe S, Baser RE, Breeden G, Neighbors HW, Jackson JS. Prevalence of and risk factors for lifetime suicide attempts among blacks in the United States. JAMA 2006;296(17):2112–23. [PubMed: 17077376]
4. Mizrahi T, Mayden R, National Committee on Racial and Ethnic Diversity. NASW Standards for Cultural Competence in Social Work Practice. 2001
5. Kessler RC, Borges G, Walters EE. Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. Arch Gen Psychiatry 1999;56(7):617–26. [PubMed: 10401507]
6. Shen X, Hackworth J, McCabe H, Lovett L, Aumage J, O'Neil J, Bull M. Characteristics of suicide from 1998-2001 in metropolitan area. Death Stud 2006;30(9):859–71. [PubMed: 17004369]
7. Spicer RS, Miller TR. Suicide acts in 8 states: incidence and case fatality rates by demographics and method. Am J Public Health 2000;90(12):1885–91. [PubMed: 11111261]
8. McIntosh JL, Santos JF. Changing patterns in methods of suicide by race and sex. Suicide Life Threat Behav 1982;12(4):221–33. [PubMed: 7184211]
9. Rujescu D, Thalmeier A, Moller HJ, Bronisch T, Giegling I. Molecular genetic findings in suicidal behavior: what is beyond the serotonergic system? Arch Suicide Res 2007;11(1):17–40. [PubMed: 17178640]
10. Thalmeier A, Dickmann M, Giegling I, Schneider B, Hartmann A, et al. Gene expression profiling of post-mortem orbitofrontal cortex in violent suicide victims. Int J Neuropsychopharmacol 2007;10:1–12.
11. Bechtold DW. Indian adolescent suicide: clinical and developmental considerations. Am Indian Alsk Native Ment Health Res Monogr Ser 1994;4:71–80. [PubMed: 8205220]
12. Centers for Disease Control. Youth suicide--United States, 1970-1980. MMWR 1987;36(6):87–9. [PubMed: 3100937]
13. Hacker K, Drainoni ML. Mental health and illness in Boston's children and adolescents: one city's experience and its implications for mental health policy makers. Public Health Rep 2001;116(4): 317–26. [PubMed: 12037260]
14. Roberts RE, Chen YR, Roberts CR. Ethnocultural differences in prevalence of adolescent suicidal behaviors. Suicide Life Threat Behav 1997;27(2):208–17. [PubMed: 9260303]
15. Shepherd G, Klein-Schwartz W. Accidental and suicidal adolescent poisoning deaths in the United States, 1979-1994. Arch Pediatr Adolesc Med 1998;152(12):1181–5. [PubMed: 9856426]
16. Zayas LH, Lester RJ, Cabassa LJ, Fortuna LR. Why do so many latina teens attempt suicide? A conceptual model for research. Am J Orthopsychiatry 2005;75(2):275–87. [PubMed: 15839764]
17. Moscicki EK, Boyd JH. Epidemiologic trends in firearm suicides among adolescents. Pediatrician 1983-1985;12(1):52–62. [PubMed: 6571111]
18. Rew L, Thomas N, Horner SD, Resnick MD, Beuhring T. Correlates of recent suicide attempts in a triethnic group of adolescents. J Nurs Scholarsh 2001;33(4):361–7. [PubMed: 11775307]

19. Bae S, Ye R, Chen S, Rivers PA, Singh KP. Risky behaviors and factors associated with suicide attempt in adolescents. Arch Suicide Res 2005;9(2):193–202. [PubMed: 16020162]
20. Pelkonen M, Marttunen M. Child and adolescent suicide: epidemiology, risk factors, and approaches to prevention. Paediatr Drugs 2003;5(4):243–65. [PubMed: 12662120]
21. Mazza JJ, Reynolds WM. A longitudinal investigation of depression, hopelessness, social support, and major and minor life events and their relation to suicidal ideation in adolescents. Suicide Life Threat Behav 1998;28(4):358–74. [PubMed: 9894304]
22. Vega WA, Gil A, Warheit G, Apospori E, Zimmerman R. The relationship of drug use to suicide ideation and attempts among African American, Hispanic, and white non-Hispanic male adolescents. Suicide Life Threat Behav 1993;23(2):110–9. [PubMed: 8342210]
23. Groves SA, Stanley BH, Sher L. Ethnicity and the relationship between adolescent alcohol use and suicidal behavior. Int J Adolesc Med Health 2007;19(1):19–25. [PubMed: 17458320]
24. Christoffel KK, Marcus D, Sagerman S, Bennett S. Adolescent suicide and suicide attempts: a population study. Pediatr Emerg Care 1988;4(1):32–40. [PubMed: 3362732]
25. Mazza JJ. The relationship between posttraumatic stress symptomatology and suicidal behavior in school-based adolescents. Suicide Life Threat Behav 2000;30(2):91–103. [PubMed: 10888051]
26. O'Leary CC, Frank DA, Grant-Knight W, Beeghly M, Augustyn M, et al. Suicidal ideation among urban nine and ten year olds. J Dev Behav Pediatr 2006;27(1):33–9. [PubMed: 16511366]
27. Warheit GJ, Zimmerman RS, Khoury EL, Vega WA, Gil AG. Disaster related stresses, depressive signs and symptoms, and suicidal ideation among a multi-racial/ethnic sample of adolescents: a longitudinal analysis. J Child Psychol Psychiatry 1996;37(4):435–44. [PubMed: 8735443]
28. Shaffer D, Garland A, Gould M, Fisher P, Trautman P. Preventing teenage suicide: a critical review. J Am Acad Child Adolesc Psychiatry 1988;27(6):675–87. [PubMed: 3058676]
29. Pirkis JE, Irwin CE Jr, Brindis CD, Sawyer MG, Friestad C, et al. Receipt of psychological or emotional counseling by suicidal adolescents. Pediatrics 2003;111(4 Pt 1):e388–93. [PubMed: 12671157]
30. Brosnahan J, Steffen LM, Lytle L, Patterson J, Boostrom A. The relation between physical activity and mental health among Hispanic and non-Hispanic white adolescents. Arch Pediatr Adolesc Med 2004;158(8):818–23. [PubMed: 15289257]
31. Aseltine RH Jr, DeMartino R. An outcome evaluation of the SOS Suicide Prevention Program. Am J Public Health 2004;94(3):446–51. [PubMed: 14998812]
32. Roberts RE, Roberts CR, Xing Y. Are Mexican American adolescents at greater risk of suicidal behaviors? Suicide Life Threat Behav 2007;37(1):10–21. [PubMed: 17397276]
33. Kaslow N, Thompson M, Meadows L, Chance S, Puett R, et al. Risk factors for suicide attempts among African American women. Depress Anxiety 2000;12(1):13–20. [PubMed: 10999241]
34. Jones GD. The role of drugs and alcohol in urban minority adolescent suicide attempts. Death Stud 1997;21(2):189–202. [PubMed: 10173143]
35. Compton MT, Thompson NJ, Kaslow NJ. Social environment factors associated with suicide attempt among low-income African Americans: the protective role of family relationships and social support. Soc Psychiatry Psychiatr Epidemiol 2005;40(3):175–85. [PubMed: 15742221]
36. Willis LA, Coombs DW, Cockerham WC, Frison SL. Ready to die: a postmodern interpretation of the increase of African-American adolescent male suicide. Soc Sci Med 2002;55(6):907–20. [PubMed: 12220093]
37. Thompson MP, Kaslow NJ, Short LM, Wyckoff S. The mediating roles of perceived social support and resources in the self-efficacy-suicide attempts relation among African American abused women. J Consult Clin Psychol 2002;70(4):942–9. [PubMed: 12182277]
38. Vega WA, Gil AG, Zimmerman RS, Warheit GJ. Risk factors for suicidal behavior among Hispanic, African-American, and non-Hispanic white boys in early adolescence. Ethn Dis 1993;3(3):229–41. [PubMed: 8167539]
39. Kung HC, Pearson JL, Wei R. Substance use, firearm availability, depressive symptoms, and mental health service utilization among white and African American suicide decedents aged 15 to 64 years. Ann Epidemiol 2005;15(8):614–21. [PubMed: 16118006]

40. Harris TL, Molock SD. Cultural orientation, family cohesion, and family support in suicide ideation and depression among African American college students. Suicide Life Threat Behav 2000;30(4): 341–53. [PubMed: 11210059]
41. Wingate LR, Bobadilla L, Burns AB, Cukrowicz KC, Hernandez A, et al. Suicidality in African American men: the roles of southern residence, religiosity, and social support. Suicide Life Threat Behav 2005;35(6):615–29. [PubMed: 16552977]
42. Early, K. Religion and suicide in the African American community. Greenwood Press; Westport, CT: 1992.
43. Stack S, Wasserman IM. Marital status, alcohol abuse and attempted suicide: a logit model. J Addict Dis 1995;14(2):43–51. [PubMed: 8541359]
44. Gutierrez PM, Muehlenkamp JJ, Konick LC, Osman A. What role does race play in adolescent suicidal ideation? Arch Suicide Res 2005;9(2):177–92. [PubMed: 16020161]
45. Gutierrez P, King CA, Ghaziuddin N. Adolescent attitudes about death in relation to suicidality. Suicide Life Threat Behav 1996;26(1):8–18. [PubMed: 9173613]
46. Early KE, Akers RL. "It's a White thing": An exploration of beliefs about suicide in the African American community. Deviant Behav 1993;14:277–96.
47. Greening L, Stoppelbein L. Religiosity, attributional style, and social support as psychosocial buffers for African American and white adolescents' perceived risk for suicide. Suicide Life Threat Behav 2002;32(4):404–17. [PubMed: 12501965]
48. Marion MS, Range LM. African American college women's suicide buffers. Suicide Life Threat Behav 2003;33(1):33–43. [PubMed: 12710538]
49. Walker RL, Bishop S. Examining a model of the relation between religiosity and suicidal ideation in a sample of African American and White college students. Suicide Life Threat Behav 2005;35(6): 630–9. [PubMed: 16552978]
50. Spann M, Molock SD, Barksdale C, Matlin S, Puri R. Suicide and African American teenagers: risk factors and coping mechanisms. Suicide Life Threat Behav 2006;36(5):553–68. [PubMed: 17087634]
51. Morrison LL, Downey DL. Racial differences in self-disclosure of suicidal ideation and reasons for living: implications for training. Cultur Divers Ethnic Minor Psychol 2000;6(4):374–86. [PubMed: 11089313]
52. Meadows LA, Kaslow NJ, Thompson MP, Jurkovic GJ. Protective factors against suicide attempt risk among African American women experiencing intimate partner violence. Am J Community Psychol 2005;36(1-2):109–21. [PubMed: 16134048]
53. Freedenthal S. Racial disparities in mental health service use by adolescents who thought about or attempted suicide. Suicide Life Threat Behav 2007;37(1):22–34. [PubMed: 17397277]
54. Smith JC, Mercy JA, Warren CW. Comparison of suicides among Anglos and Hispanics in five southwestern states. Suicide Life Threat Behav 1985;15(1):14–26. [PubMed: 3992614]
55. Grunbaum JA, Kann L, Kinchen SA, Ross JG, Gowda VR, et al. Youth risk behavior surveillance. National Alternative High School Youth Risk Behavior Survey, United States, 1998. J Sch Health 2000;70(1):5–17. [PubMed: 10697808]
56. Razin AM, O'Dowd MA, Nathan A, Rodriguez I, Goldfield A, et al. Suicidal behavior among innercity Hispanic adolescent females. Gen Hosp Psychiatry 1991;13(1):45–58. [PubMed: 1993520]
57. Guiao IZ, Thompson EA. Ethnicity and problem behaviors among adolescent females in the United States. Health Care Women Int 2004;25(4):296–310. [PubMed: 15199970]
58. Olvera RL. Suicidal ideation in Hispanic and mixed-ancestry adolescents. Suicide Life Threat Behav 2001;31(4):416–27. [PubMed: 11775717]
59. Hovey JD. Acculturative stress, depression, and suicidal ideation among Central American immigrants. Suicide Life Threat Behav 2000;30(2):125–39. [PubMed: 10888053]
60. Farris B, Glenn N. Fatalism and familism among Anglos and Mexican-Americans in San Antonio. Sociol Soc Res 1976;60:393–402.
61. Mirowsky J, Ross CE. Mexican culture and its emotional contradictions. J Health Soc Behav 1984;25 (1):2–13. [PubMed: 6725922]

62. Swanson JW, Linskey AO, Quintero-Salinas R, Pumariega AJ, Holzer CE 3rd. A binational school survey of depressive symptoms, drug use, and suicidal ideation. J Am Acad Child Adolesc Psychiatry 1992;31(4):669–78. [PubMed: 1644730]
63. Marsiglia FF, Kulis S, Hecht ML, Sills S. Ethnicity and ethnic identity as predictors of drug norms and drug use among preadolescents in the US Southwest. Subst Use Misuse 2004;39(7):1061–94. [PubMed: 15387204]
64. Roberts RE, Chen YW. Depressive symptoms and suicidal ideation among Mexican-origin and Anglo adolescents. J Am Acad Child Adolesc Psychiatry 1995;34(1):81–90. [PubMed: 7860463]
65. Hovey JD. Religion and suicidal ideation in a sample of Latin American immigrants. Psychol Rep 1999;85(1):171–7. [PubMed: 10575983]
66. Heiman EM, Burruel G, Chavez N. Factors determining effective psychiatric outpatient treatment for Mexican-Americans. Hosp Community Psychiatry 1975;26(8):515–7. [PubMed: 1165087]
67. Hesketh T, Ding QJ, Jenkins R. Suicide ideation in Chinese adolescents. Soc Psychiatry Psychiatr Epidemiol 2002;37(5):230–5. [PubMed: 12107715]
68. Abright AR, Chung H. Depression in Asian American children. West J Med 2002;176(4):244–8. [PubMed: 12208830]
69. Yeung A, Chan R, Mischoulon D, Sonawalla S, Wong E, et al. Prevalence of major depressive disorder among Chinese-Americans in primary care. Gen Hosp Psychiatry 2004;26(1):24–30. [PubMed: 14757299]
70. Choi H, Stafford L, Meininger JC, Roberts RE, Smith DP. Psychometric properties of the DSM scale for depression (DSD) with Korean-American youths. Issues Ment Health Nurs 2002;23(8):735–56. [PubMed: 12523952]
71. Chen IG, Roberts RE, Aday LA. Ethnicity and adolescent depression: the case of Chinese Americans. J Nerv Ment Dis 1998;186(10):623–30. [PubMed: 9788639]
72. Lau AS, Jernewall NM, Zane N, Myers HF. Correlates of suicidal behaviors among Asian American outpatient youths. Cultur Divers Ethnic Minor Psychol 2002;8(3):199–213. [PubMed: 12143098]
73. Yang B, Clum GA. Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness, and suicide ideation in an Asian student population: a test of a model. Suicide Life Threat Behav 1994;24(2):127–39. [PubMed: 8053007]
74. Lee MT, Wong BP, Chow BW, McBride-Chang C. Predictors of suicide ideation and depression in Hong Kong adolescents: perceptions of academic and family climates. Suicide Life Threat Behav 2006;36(1):82–96. [PubMed: 16676629]
75. Bjorck JP, Cuthbertson W, Thurman JW, Lee YS. Ethnicity, coping, and distress among Korean Americans, Filipino Americans, and Caucasian Americans. J Soc Psychol 2001;141(4):421–42. [PubMed: 11577844]
76. Zhang J, Jin S. Determinants of suicide ideation: a comparison of Chinese and American college students. Adolescence 1996;31(122):451–67. [PubMed: 8726903]
77. Ogden M, Spector MI, Hill CA Jr. Suicides and homicides among Indians. Public Health Rep 1970;85 (1):75–80. [PubMed: 4983432]
78. Bernard SJ, Paulozzi LJ, Wallace DL. Fatal injuries among children by race and ethnicity--United States, 1999-2002. MMWR Surveill Summ 2007;56(5):1–16. [PubMed: 17510613]
79. Grossman DC, Milligan BC, Deyo RA. Risk factors for suicide attempts among Navajo adolescents. Am J Public Health 1991;81(7):870–4. [PubMed: 2053663]
80. Costello EJ, Farmer EM, Angold A, Burns BJ, Erkanli A. Psychiatric disorders among American Indian and white youth in Appalachia: the Great Smoky Mountains Study. Am J Public Health 1997;87(5):827–32. [PubMed: 9184514]
81. Novins DK, Beals J, Roberts RE, Manson SM. Factors associated with suicide ideation among American Indian adolescents: does culture matter? Suicide Life Threat Behav 1999;29(4):332–46. [PubMed: 10636327]
82. Gary FA, Baker M, Grandbois DM. Perspectives on suicide prevention among American Indian and Alaska native children and adolescents: a call for help. Online J Issues Nurs 2005;10(2):6. [PubMed: 15977979]
83. Garroutte EM, Goldberg J, Beals J, Herrell R, Manson SM. Spirituality and attempted suicide among American Indians. Soc Sci Med 2003;56(7):1571–9. [PubMed: 12614706]

84. Colucci E, Martin G. Ethnocultural aspects of suicide in young people: a systematic literature review part 1: Rates and methods of youth suicide. Suicide Life Threat Behav 2007;37(2):197–221. [PubMed: 17521273]

85. Yuen NY, Nahulu LB, Hishinuma ES, Miyamoto RH. Cultural identification and attempted suicide in Native Hawaiian adolescents. J Am Acad Child Adolesc Psychiatry 2000;39(3):360–7. [PubMed: 10714057]

86. Nishimura ST, Goebert DA, Ramisetty-Mikler S, Caetano R. Adolescent alcohol use and suicide indicators among adolescents in Hawaii. Cultur Divers Ethnic Minor Psychol 2005;11(4):309–20. [PubMed: 16478351]

87. Griffith, E.; Delgado, A.; Foulks, E.; et al. Committee on Cultural Psychiatry. Group for the Advancement of Psychiatry. Suicide and ethnicity in the United States. Brunner Mazel; New York: 1989. Report no 128