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The Effects of Ethnicity on Adolescent Resilience against Depression

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Abstract

Adolescents (N=6,504) from the National Longitudinal Study of Adolescent Health participated in a study exploring racial differences in access to resources against depression. Significant results indicated Black adolescents' advantage on perceived adult and family support, perceived intelligence, self-esteem, active coping skills, and college expectations; Hispanics were advantaged in maternal relationships. White adolescents' resources were parents' education, two biological parent households, two parent households, perceived peer support, and survival expectations. Hispanic and Black adolescents were more likely to be on welfare with the former also suffering through unemployment and the latter living with a single mother. Whites were most likely to live with a single father. Future research should investigate the interactions' potency and apply it to treatment of adolescent depression.

The Effects of Ethnicity on Adolescent Resilience against Depression

According to Gans (1990), nearly half of all adolescents today give an account of experiences regarding stressful situations in their homes and/or within their schools. These stressors include major life changes such as changing schools or losing a loved one, chronically taxing conditions such as poverty or domestic violence, and day to day hassles such as school exams or conflicts with parents and siblings (Compas, 1987). For some adolescents, exposure to such unremitting circumstances can result in physical or psychological difficulties. However, there are some teenagers who seem not to be as negatively affected by these same adverse conditions. This peculiarity piqued the interests of researchers, and the lives of youth became the subject of studies. Originally, the typical perspective employed by researchers was to study the youth who had not coped well with any hardships or obstacles they might have faced in their lifetimes. It was not until the 1970s that researchers shifted from this traditional focus to instead explore how some children and adolescents recovered from otherwise debilitating circumstances (Hurd, 2004). This paradigm shift introduced the study of resilience in children and adolescents and the different possible protective factors that augment said resilience (Howard et al., 1999).

The formal advent of resiliency research was accompanied by the many definitions used to depict what exactly one means when resiliency is mentioned. For example, Hauser, Vieyra, Jacobson, and Wertlieb (1985) described it as the capacity of some who are exposed to risk factors to overcome those risks and avoid negative consequences such as delinquency, academic and behavior problems, and physical complications. Vaillant (1993) defined resiliency as “the capacity to be bent without breaking and the capacity, once bent, to spring back” (p. 284). However, Rutter (1990) provided a reminder that resiliency is not a fixed attribute of a child, but rather, a process of coping that is vulnerable to change along with varying life conditions. Such

stressors include biological (e.g., prenatal exposure to substances with potential for developmental delays), psychological (e.g., maternal depression or other psychopathology), economic (e.g., leading to malnutrition and inadequate health care), and social (e.g., high unemployment and crime in the neighborhood) phenomena (Aronowitz, 2005).

New evidence on resiliency is receiving increasing attention because investigators want to find ways to protect young people from the damaging effects of stressful life situations. For example, Kovacs (1997) claimed that the current rapid social change and the associated results of overcrowding cities, family breakup, increased drug use, and shifts in occupational and employment patterns may increase the levels of stress of adolescents across the country. Kovacs implicates these changes as a potential reason for the increase of occurrence of an often debilitating psychological disorder in young people—depression. Depression is actually the most common mental health problem among youth today (Kelder et al., 2001; MacKay, Fingerhut, & Duran, 2000). The long-lasting emotional suffering, everyday life obstacles, and the accompanying heightened threat of suicide and substance abuse make depression in young people a very serious concern (Fombonne, Wostear, Cooper, Harrington, & Rutter, 2001a, 2001b). Therefore, it stands as imperative that any means of protection against strenuous life experiences and their repercussions are identified and explored.

Several studies have found the following four broad factors that provide this defense against adversities (Garmezy, Masten, & Tellegen, 1984; Rak & Patterson, 1996). First, personal characteristics include an adolescent's developmental stage, intellectual capacity, social competence, personal goals, an easy temperament, high self-esteem, and a mastery-oriented approach to new situations. Next, self-concept usually describes a heightened self-understanding, the possession of adaptive skills, and an ability to form close personal relationships. The third

broad factor revolves around family characteristics that especially include a family environment that provides warmth, closeness, and organization in the child's life. Finally, social support outside the immediate family typically comes from a grandparent, teacher, mentor, or close friend who develops a special relationship with the child, offering a support system and a positive coping model.

With these four broad types of protective factors in mind, researchers have proposed several models of resiliency. These include the compensatory model, the challenge model, the risk-protective model, and finally, the protective-protective model. The compensatory model states that risk and protective factors have an additive effect, with risk factors increasing maladjustment and protective factors decreasing maladjustment. The challenge model describes a curvilinear relationship in which it is actually more beneficial when trying to reduce a negative outcome to be exposed to a small amount of risk rather than face no exposure to it at all. The risk-protective model suggests that protective factors buffer risk factors, which serves to reduce a negative outcome. Finally, the protective-protective model posits a form of cumulative protection—as the number of protective factors increases, the impact of the risk factors on the negative outcome decreases. While having a model that attempts to describe the mechanism(s) underlying a particular psychological stressor proves beneficial in most cases, the differences among the aforementioned models can actually cause confusion and misunderstandings of the research among the researchers themselves. It proves difficult and perplexing to meander through and compare findings that do not share the same theoretical model as their basis.

Luthar, Cicchetti, and Becker (2000) stated that cross study variation in definitions of resilience in the adolescent literature reflects a deeper problem within the field of resilience—the lack of a unified theory of resilience capable of guiding more structured and empirically based

approaches to developing the construct. According to Olsson et al. (2003), considerable confusion arises when the outcome of adaptation and the process of adaptation are used interchangeably to describe resilience. On the one hand, resilience can be defined as an outcome characterized by particular patterns of functional behavior despite risk. Alternatively, resilience also has been defined as a dynamic process of adaptation to a risk setting that involves interaction between a range of risk and protective factors from the individual to the social. Thus, as Luthar et al. noted, the contrasting definitions of resilience generate uncertainty as to how resilience may actually function. Any theoretical account of resilience that does not discriminate between process and outcome may be confusing.

In addition to lacking a unified theory, the field of resilience research has had little to say about racial and ethnic differences in coping among youth. This gap in the literature is largely due to the fact that the vast majority of research has been done on U.S. and European White youth (Compas et al., 2001; Rosella, 1994). In one review, among the 53% of studies including race as a variable, non-White adolescents were still underrepresented (Rosella, 1994). The research that has been conducted thus far seems to have largely neglected cross-cultural comparisons. This empirical inattention to possible resilience factors among minority youth is troubling and represents an area of research that has yet to be investigated to its full potential.

The purpose of the present research was to investigate the potential existence of differences in an adolescent's possession of protective factors depending upon his or her race. The likelihood of the appearance and frequency of risk factors in particular ethnicities was also explored. Once the occurrence of these protective factors was discovered, they were then measured against the outcome variable of depression. Mental health problems rank among the biggest adversities that adolescents must face and consequently handle. As previously stated,

depression is the most common mental health problem among youth today. Depression was identified as especially relevant in the 2001 Youth Risk Behavior Surveillance, which found youth in ethnic minorities to be significantly more likely to report symptoms of depression, such as feeling sad and hopeless almost everyday for two weeks. Overall, the prevalence of having felt sad or hopeless almost every day for more than two weeks was higher among Hispanic (35.4%) than white (26.2%) and black (26.3%) students (Grunbaum et al., 2004). These findings make it critical to investigate how the rate of depression fluctuates when race and protective factors are considered.

In order to accomplish this goal, data regarding risk and protective factors and depressive symptoms of adolescents was utilized from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative study that explores the causes of health-related behaviors of adolescents in grades 7 through 12 and their outcomes in young adulthood. Add Health seeks to examine how social contexts (families, friends, peers, schools, neighborhoods, and communities) influence adolescents' health and risk behaviors (Bearman, Jones, & Udry, 1997).

Because it would be pointless to study protective factors without a risk factor to protect against, the researcher adhered to the dynamic process and to the challenge theories of resilience, which share similar stances towards the relationship between risk and protective factors. Both of these paradigms state that there exists an interaction between risk and protective factors. The former deems it to be an active process of adaptation between the two types of factors. The latter maintains that it actually proves more advantageous for an individual to be exposed to a minimal amount of risk than to none at all.

The current study considered high scores on the variables of self-efficacy and ambitious future expectations to be protective factors. Since the remaining variables of relations with parents, personality, and parental demographics could be categorized as a risk or protective factor, they were classified once their nature could be characterized for each particular subject. The researcher's first hypothesis predicted that youth in the ethnic majority would have more protective factors overall than ethnic minority youth. It was also predicted that youth in the ethnic minority would be more likely to have more of some protective factors than White youth. Essentially, it was predicted that there would be a difference in the access to resources among the races. Once access to resources and exposure to risk factors was determined, it was then predicted that those protective factors in which ethnic minority youth were advantaged would explain the difference in depression levels to a greater degree than for White youth. Because of the lack of cross-cultural literature on the coping skills of different ethnicities, no basis was found for specific predictions about which risk and protective factors would be more or less explanatory for which ethnic groups.

Method

Participants

Participants were approximately 6,504 adolescents selected from Wave I and Wave II of the public use sample of the National Longitudinal Study of Adolescent Health. Of those participants, 3,356 were female and 3,153 were male. 3,856 were Caucasian, 1,551 were African American, and 743 were Latino. Wave I was composed of a nationally representative sample of adolescents in grades 7 to 12 in the United States. These students came from 80 pairs of schools that, to ensure the sample were representative of U.S. schools, was systematically sampled and stratified with respect to region of country, urbanicity, school type and size, and ethnicity. The

students, within the sample, were stratified by grade and sex (Bearman, Jones, & Udry, 1997). Parental consent was required to allow students to participate in the study. Except for those cases in which the schools required active consent forms, passive consent forms were used. Active consent forms require the signature of an adolescent's guardian to allow the youth to participate in the study. Passive consent only calls for a parental response if one does not wish to have his or her child participate. Data for Wave II was gathered from the same sample a year later.

Procedure

Each school provided a roster of all students enrolled. From the rosters and the pool of participants in the in-school survey, adolescents in grades 7 to 12 were sampled to participate in the in-home interview. Adolescents were interviewed at two points in time, first at Wave I and then a year later, at Wave II. Add Health in-home interviews were conducted between April and December 1995. All respondents were administered the same interview, which took from 1 to 2 hours to complete depending on the respondent's age and experiences. All research procedures were reviewed and approved by the University of North Carolina Institutional Review Board prior to data collection. Care was taken to screen respondents on age and experience so that only appropriate questions were asked. For purposes of confidentiality, all data were recorded on laptop computers. For less sensitive sections, the interviewer read the questions and entered the respondent's answers. For more sensitive sections, the respondent listened to prerecorded questions through earphones and entered the answers directly on the computer. Such a procedure was used to maintain data security and to minimize potential for interviewer or parental influence on the respondent's answer. As already mentioned, a parent or guardian was interviewed during Wave I of the study. The questionnaire asked demographic and health-related information about

the parent or guardian and general questions about the adolescent respondent (Bearman et al., 1997).

Measures

The twenty one risk and protective factors analyzed were classified into seven groups of related variables. The first category, family background, was comprised of the variables of welfare, unemployment, and parents' education. The second category, household type, looked at whether the adolescent's family was headed by two biological parents, two parents, a single mom, a single dad, or another form of parent(s). The third category analyzed involved the adolescent's perceived system of support: adults care, teachers care, friends care, and family support. The fourth category explored the subject's relationship with his or her mother. This relationship variable was formed after transforming and combining two other variables: closeness and caring and relationship with mother. Only an adolescent's relationship with his or her mother was analyzed due to less data pertaining to an adolescent's biological father. The fifth grouping referred to self-perceptions with regards to the variables of perceived intelligence and self-esteem. The next category solely analyzed the adolescent's active coping skills. Finally, the seventh classification related to the expectations for the future as seen through the analysis of the teenager's expectations for both college and survival to age 35.

The measure of the criterion variable for depression was drawn from the Add Health survey. A 19-item scale adapted from the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was used to measure depression and was called the "feeling scale" in the Wave I and Wave II Add Health database. The Likert-type scale determined how the respondent had felt in the week preceding the interview relative to depressed affect and feelings: 0 (rarely or none of the time); 1 (some or a little of the time); 2 (occasionally or a moderate amount of the

time); and 3 (most or all of the time). To standardize the items such that a higher scale score meant depression, four items were reverse scored.

Results

Analysis Strategy

Once classifications were conducted, the mean differences of each of the variables were gathered to discover the occurrence of each of the factors for White, Black, and Hispanic adolescents. Following this procedure, t-tests were conducted to measure the levels of statistical significance between races for these mean differences. Finally, regression equations were utilized separately for males and females to measure the outcome variable of depression as determined during the second interview date one year after the original survey. Since previous literature has indicated significant differences for levels of depression between adolescent males and females, it was decided to complete this section of the analysis separately. The regression equations were meant to assess the degree to which group differences in access to resources account for group differences in depression as an indicator of psychological well-being. For all comparisons, $p < .05$ was adopted as the criterion for establishing statistical significance.

Group Differences in Mean Levels of Adolescents' Access to Resources

The mean differences and t-tests for each of the variables as divided by race are presented in Table 1. The mean level of depression was found for each of the races. The results indicated that Hispanic adolescents ($M = 1.356$, $SD = 5.248$) had the highest levels of depression followed by Black ($M = 0.151$, $SD = 5.029$), and White teens ($M = -0.531$, $SD = 5.024$). The t-tests of the mean differences in the levels of depression yielded significant results. Therefore, Hispanic adolescents, $t(1098) = -4.49$, $p < .001$, were found to be significantly more depressed in

comparison to Black teens, $t(1098) = 4.49, p < .001$. Black adolescents, in turn, were significantly more depressed than White adolescents, $t(1941) = 3.82, p < .001$.

The first category to be assessed was for those variables that comprised the family background section. It was found that Hispanic families ($M = 0.161, SD = 0.368$) are more likely to receive welfare assistance than Black ($M = 0.150, SD = 0.358$) and White families ($M = 0.057, SD = 0.231$). With regards to parental unemployment, parents of Hispanic adolescents ($M = 0.121, SD = 0.327$) were more likely to be unemployed than parents of Black ($M = 0.090, SD = 0.286$) and White teens ($M = 0.079, SD = 0.270$). Parents of White adolescents ($M = 14.257, SD = 2.729$) received a higher level of education than parents of Black ($M = 14.157, SD = 2.816$) and Hispanic teens ($M = 11.765, SD = 3.665$).

Analysis of the family background category showed several statistically significant differences in the welfare, unemployment, and parents' education. White adolescents, $t(1697) = 8.73, p < .001$, were significantly less likely to be on welfare than Black, $t(1697) = -8.73, p < .001$, and Hispanic teens, $t(703) = -6.80, p < .001$. No significant difference was found between Black, $t(1180) = 0.59, p < .05$ and Hispanic teens, $t(1180) = -0.59, p > .05$. Parents of Hispanic adolescents were more likely to be unemployed than parents of Black adolescents: $t(1302) = 2.25, p < .05$ compared to $t(1302) = -2.25, p < .05$ and this difference was statistically significant. When comparing Hispanic parents, $t(947) = -3.28, p = .001$, to White parents, $t(947) = 3.28, p = .001$, Hispanic parents were significantly more likely to be unemployed. There was no significant difference between the unemployment of the parents of White, $t(2725) = 1.21, p > .05$, and Black teens, $t(2725) = -1.21, p > .05$. White adolescents were also found to have parents, $t(890) = -17.49, p < .001$, that had significantly more years of education than parents of Hispanic teens, $t(890) = 17.49, p < .001$. The education level of the parents of Black adolescents, $t(2752) =$

1.19, $p > .05$, was not significantly different than the education level of the parents of White teens, $t(2752) = -1.19, p > .05$.

The second category to be assessed included those variables that comprised the different types of households in which an adolescent could live. There was a higher average of White adolescents ($M = 0.598, SD = 0.490$) living in a household with two biological parents than there was for Hispanic ($M = 0.493, SD = 0.500$) and Black adolescents ($M = 0.337, SD = 0.473$). White adolescents ($M = 0.153, SD = 0.360$) were also more likely to live in a household with two parents in it than Hispanic ($M = 0.129, SD = 0.336$) and Black adolescents ($M = 0.123, SD = 0.328$). For single mother households, Black adolescents ($M = 0.421, SD = 0.494$) were more likely to be in residence than Hispanic ($M = 0.271, SD = 0.445$) and White teens ($M = 0.169, SD = 0.375$). Single father households were more common among White adolescents ($M = 0.038, SD = 0.190$) than Hispanic ($M = 0.035, SD = 0.184$) and Black teens ($M = 0.026, SD = 0.159$). Black teens ($M = 0.094, SD = 0.291$) were more likely than Hispanic ($M = 0.073, SD = 0.260$) and White adolescents ($M = 0.043, SD = 0.202$) to live in households headed by other individuals.

Analysis of the household type category displayed significant differences across two biological parents, two parents, single mother, single father, and other parental guardians. Households with two biological parents were significantly more likely to occur among White, $t(1035) = -5.25, p < .001$, than Hispanic teens, $t(1035) = 5.25, p < .001$. In turn, Hispanic teens, $t(1391) = -7.09, p < .001$, were significantly more likely than Black adolescents, $t(1391) = 7.09, p < .001$, to have a two biological parent household. Two parents in a household were also significantly more likely to be found among White teens, $t(3124) = -3.03, p < .05$, than Black teens, $t(3124) = 3.03, p < .05$. Black teens, $t(1609) = -7.32, p < .001$, were significantly more

likely than Hispanic teens to have a single mother head their home, $t(1609) = 7.32, p < .001$.

White teens, $t(955) = 5.83, p < .001$, were significantly less likely than Hispanic teens, $t(955) = -5.83, p < .001$, to live with a single mother. Conversely, white adolescents, $t(1070) = -2.34, p < .05$, were also significantly more likely to live with a single father than Black teens, $t(1070) = 2.34, p < .05$. Finally, white teens were significantly less likely than both Black, $t(2174) = -6.31, p < .001$, and Hispanic adolescents, $t(922) = -2.99, p < .05$, to live with an alternative set of parents. The mean difference between Black and Hispanic adolescents was not significant.

The third category to be analyzed was perceived support. Black adolescents ($M = 4.435, SD = 0.855$) were more likely to believe that adults cared about them than White ($M = 4.380, SD = 0.782$) or Hispanic teens ($M = 4.309, SD = 0.920$). With regards to perceiving that teachers cared about them, Black teens ($M = 3.563, SD = 1.038$) were more likely to do so than White ($M = 3.554, SD = 0.961$) and Hispanic adolescents ($M = 3.521, SD = 1.077$). In contrast, White adolescents ($M = 4.338, SD = 0.716$) showed a higher average in the belief that their friends cared about them than Hispanic ($M = 4.140, SD = 0.880$) or Black teens ($M = 4.088, SD = 0.886$). Finally, Black teens ($M = 3.831, SD = 0.855$) were the most likely to believe that their family cared about them, followed by Hispanic ($M = 3.760, SD = 0.884$) and then White adolescents ($M = 3.748, SD = 0.812$).

Analysis of the perceived support classification revealed a few significant differences across the variables between races. Black adolescents were significantly more likely to perceive that adults cared about them than Hispanic, $t(1350) = 3.13, p < .05$, or White teens, $t(2629) = 2.19, p < .05$. The mean difference between White, $t(945) = -1.96, p = .051$, and Hispanic adolescents, $t(945) = 1.96, p = .051$, in perceived adult support was marginally significant. There were actually no significant differences in the means for perceived teacher support across

the races. White adolescents were significantly more likely to believe that their friends cared about them than either Hispanic, $t(928) = 5.74, p < .001$, or Black adolescents, $t(2389) = 9.86, p < .001$. There was no significant difference in the mean perception levels between Black and Hispanic adolescents. Finally, Black teens were significantly more likely to think their family cared about them than White teens, $t(2724) = 3.28, p = .001$, and marginally significant for Hispanic adolescents, $t(1401) = 1.80, p = .072$. The mean difference between White and Hispanic adolescents was non-significant.

The fourth category analyzed was for the relationship between the adolescent and his or her mother. Hispanic adolescents ($M = 3.039, SD = 0.396$), actually had a better relationship with their mother followed by White ($M = 3.004, SD = 0.361$), and then Black teens ($M = 2.971, SD = 0.383$). T-tests revealed that Hispanic adolescents, $t(913) = -2.15, p < .05$, were significantly more likely to have a better relationship with their mother than White adolescents, $t(913) = 2.15, p < .05$. Analysis of the mean difference between White, $t(2544) = -2.81, p < .05$, and Black adolescents, $t(2544) = 2.81, p < .05$, was also significant.

The fifth category to be analyzed consisted of those variables that comprised the section of self-perceptions. Black adolescents ($M = 4.066, SD = 1.166$) were more likely to believe that they were more intelligent compared to other people their age than White ($M = 3.868, SD = 1.066$) or Hispanic adolescents ($M = 3.557, SD = 1.041$). Black adolescents ($M = 16.892, SD = 2.349$) also had the highest mean level of self-esteem, followed by White ($M = 16.267, SD = 2.524$) and Hispanic adolescents ($M = 16.032, SD = 2.714$), respectively.

Analysis of the self-perceptions category found that Black adolescents, $t(2627) = 5.76, p < .001$, were significantly more likely than White adolescents, $t(2627) = -5.76,$

$p < .001$, to believe themselves to be more intelligent than their peers. In turn, the mean difference between White, $t(1049) = -7.40, p < .001$, and Hispanic teens, $t(1049) = 7.40, p < .001$, was statistically significant. Blacks, $t(3046) = -8.65, p < .001$, were also significantly more likely to have a higher self-esteem than Whites, $t(3046) = 8.65, p < .001$. The mean difference between Whites, $t(998) = -2.17, p < .05$, and Hispanics, $t(998) = 2.17, p < .05$, was also statistically significant.

The sixth category analyzed was for the active coping skills of the adolescent. Black adolescents ($M = 15.543, SD = 2.629$) were found to have the highest level of active coping skills followed by Hispanic ($M = 15.217, SD = 2.562$) and White adolescents ($M = 15.006, SD = 2.571$), respectively. The mean difference between Black, $t(1476) = -2.81, p < .05$, and Hispanic adolescents, $t(1476) = -2.81, p < .05$, was statistically significant. Hispanic adolescents, $t(1032) = -2.04, p < .05$, in turn, were significantly more likely to have active coping skills than White adolescents, $t(1032) = -2.04, p < .05$.

The seventh and final category analyzed pertained to the future expectations of the adolescents. Black teens ($M = 4.378, SD = 0.926$) possessed higher college expectations than White ($M = 4.293, SD = 1.036$) or Hispanic teens ($M = 4.101, SD = 1.047$). However, they ($M = 4.187, SD = 0.942$) also had the lowest expectations versus White ($M = 4.475, SD = 0.769$) and Hispanic teens ($M = 4.194, SD = 0.938$) for whether they would survive to the age of 35.

Analysis of the seventh category of expectations for the future found that the mean difference for Blacks, $t(3104) = -2.94, p < .05$, was significantly more likely than White teens, $t(3104) = 2.94, p < .05$, to believe they were going to attend college. White adolescents $t(1020) = -4.54, p < .001$, were also significantly more likely to believe this than Hispanic adolescents, $t(1020) = 4.54, p < .001$. White teens also had a statistically significant higher survival

expectation than both Hispanic, $t(927) = 7.63, p < .001$, and Black teenagers, $t(2400) = 10.64, p < .001$. The mean difference between Hispanic and Black adolescents was non-significant.

Multi-Variable Models of Depression for Males

The variables were then analyzed using regression equations. While Table 2 depicts the regression coefficients for males, Table 3 displays the regression coefficients for females. Model one tested whether depression actually varies across racial and ethnic groups. Regression coefficients indicate that Black males, $\beta = 0.819, t(2) = 4.84, p < .001$, and Hispanic males, $B = 1.460, t(2) = 4.94, p < .001$, were significantly more depressed than White males.

Model two assessed the degree to which differences in family background variables accounted for racial and ethnic differences in depression. Once the variables of welfare, unemployment, and parents' education were entered into the first model, it was found that this category of variables was significantly related to depression. Also, approximately 25% of the difference in depression levels was explained for black males, $\beta = 0.630, t(5) = 2.49, p = 0.013$, indicating a disadvantage in the family background category. This percentage was calculated using the following equation: $1 - (0.630/0.819) = \% \text{ explained difference}$. These variables also pointed towards a statistically significant disadvantage that accounted for a little over one-third of the difference for Hispanic males, $\beta = 0.926, t(5) = 2.79, p = .005$.

The third model analyzed the effect of household type on racial differences in depression. African American males, $\beta = 0.469, t(6) = 1.94, p = 0.052$, are marginally significantly more disadvantaged compared to White males. Almost 43% of the difference in depression between White and Black adolescents was explained once these variables were included in the model. Hispanic males, $\beta = 1.363, t(6) = 1.94, p < .001$, were also significantly more disadvantaged compared to White males with regards to household type; almost 7% of the differences was

explained with the inclusion of these variables. The single father household type, $\beta = -0.790$, $t(6) = -1.25$, $p = 0.211$, appears to be the least conducive to eliminating levels of depression, followed by single mother households, $\beta = -1.537$, $t(6) = -3.20$, $p = 0.001$, and two parent households, $\beta = -1.765$, $t(6) = -3.49$, $p < 0.001$.

Model four assessed the degree to which differences in perceived support variables account for racial and ethnic differences in depression. Once the variables of perceived support from adults, teachers, friends, and family were entered into the first model, it was found that Black males actually benefited from these perceptions, $\beta = 0.911$, $t(6) = 4.05$, $p < 0.001$. Specifically, the greatest advantages were found in perceived family support, $\beta = -1.034$, $t(6) = -8.04$, $p < 0.001$, perceived care by adults, $\beta = -0.507$, $t(6) = -4.14$, $p < 0.001$, and to a smaller degree, perceived care from friends, $\beta = -0.309$, $t(6) = -2.54$, $p = 0.011$. For Hispanic males, $\beta = 1.379$, $t(6) = 4.83$, $p < 0.001$, the variables of perceived support were significantly related to depression and explained 5.5% of the difference in depression levels.

The fifth model analyzed the effect the adolescent's relationship with his mother had on racial differences in depression. Even though a Black male adolescent's relationship with his mother was significantly related to his depression level, it was unable to largely attenuate the racial differences in depression, $\beta = 0.805$, $t(3) = 3.38$, $p = 0.001$, with the variable only explaining approximately 2% of the difference. A Hispanic male adolescent's relationship with his mother, though significantly related to depression, also had little explanatory influence, $\beta = 1.389$, $t(3) = 4.55$, $p < 0.001$, with about 5% of the difference being explained.

Model six assessed the degree to which differences in self-perception variables account for racial and ethnic differences in depression. Once the variables of perceived intelligence and self-esteem were entered into the first model, it was found that the difference in depression levels

for Black males was accentuated, $\beta = 1.059$, $t(4) = 4.84$, $p < 0.001$, indicating an advantageous effect. Of the two variables, it appears that self-esteem levels, $\beta = -0.589$, $t(4) = -15.61$, $p < 0.001$, had the greater protective effect against depression than perceived intelligence, $\beta = -0.388$, $t(4) = -4.91$, $p < 0.001$. For Hispanic males, $\beta = 1.238$, $t(4) = 4.41$, $p < 0.001$, the variables of self-perception were significantly related to depression and actually explained 15% of the differences in depression levels.

The seventh model analyzed the effect adolescents' active coping skills had on racial differences in depression. While the active coping skills of Black males were significantly related to depression, $\beta = 0.806$, $t(3) = 3.47$, $p = 0.001$, approximately only 2% of the differences were explained. For Hispanic males, the difference in depression was actually accentuated, $\beta = 1.50$, $t(4) = 5.06$, $p < 0.001$, which indicates that active coping had a very slight, but significantly advantageous effect for them.

Model eight assessed the degree to which differences in future expectations variables account for racial and ethnic differences in depression. Once the variables of college and survival expectations were entered into the first model, it was found that these variables were significantly related to depression and that African American males were more disadvantaged than White males with regards to future expectations, $\beta = 0.515$, $t(4) = 2.27$, $p = 0.023$. Approximately 37% of the difference in depression levels was explained by future expectations. These variables also pointed towards a statistically significant disadvantage that accounted for 32% of the difference for Hispanic males, $\beta = 0.990$, $t(4) = 3.44$, $p = .001$. Therefore, when future expectations are low, Black and Hispanic males are more likely to be depressed.

The ninth and final model included each of the previous aforementioned eight categories. Once the variables from all of the categories were entered into the first model together, 99.9% of the difference in depression levels was explained for Black males, $\beta = 0.538$, $t(19) = 2.14$, $p = .033$, and 49% of the difference for Hispanic males was also explained, $\beta = 0.744$, $t(19) = 2.35$, $p = .019$.

Multi-Variable Models of Depression for Females

Model one tested whether depression actually varies across racial and ethnic groups. Regression coefficients indicate that Black females, $\beta = 0.226$, $t(2) = 0.85$, $p = .394$, and white females exhibited no significant difference in depression levels. However, Hispanic females, $\beta = 2.013$, $t(2) = 5.73$, $p < .001$, were significantly more likely to be depressed than Black and White females.

Model two assessed the degree to which differences in family background variables accounted for racial and ethnic differences in depression. Once the variables of welfare, unemployment, and parents' education were entered into the first model, it was found that the variables were not significantly related to depression for African American females; the difference in depression levels was slightly accentuated for black females, $\beta = 0.235$, $t(5) = 0.83$, $p = 0.407$. After all, according to the mean analysis, there was no statistical difference between White and Black adolescents with regards to unemployment and parents' education. These variables pointed towards a statistically significant disadvantage that accounted for approximately 36% of the difference for Hispanic females, $\beta = 1.29$, $t(5) = 3.33$, $p = .001$. Specifically, unemployment was a greater disadvantage that corresponded to an increase in depression, $\beta = 1.145$, $t(5) = 2.92$, $p = .004$.

The third model analyzed the effect of household type on racial differences in depression. African American females, $\beta = -0.087$, $t(6) = -0.32$, $p = 0.748$, saw their depression levels decrease when the household type variables were added into the model; their levels of depression were almost lower than that of the White females. Almost 7% of the difference was explained once these variables were included in the model for Hispanic females, $\beta = 1.872$, $t(6) = 5.34$, $p < .001$. The single father household type, $\beta = -0.963$, $t(6) = -1.25$, $p = 1.18$, appears to be the least conducive to eliminating levels of depression. Even though they are not significantly related to depression, single mother households, $\beta = -0.363$, $t(6) = -0.70$, $p = 0.487$, and two parent households, $\beta = -0.480$, $t(6) = -0.85$, $p = 0.394$, are somewhat more protective for adolescent females against depression. As expected, a two biological household proved to be the most advantageous and significantly related to depression, $\beta = -1.620$, $t(6) = -3.23$, $p = 0.001$.

Model four assessed the degree to which differences in perceived support variables account for racial and ethnic differences in depression. Once the variables of perceived support from adults, teachers, friends, and family were entered into the first model, it was found that these variables were significantly related to depression and accounted for 37% of the differences for Black females, $\beta = 0.142$, $t(6) = 0.56$, $p = 0.577$. Specifically, the greatest advantage once again was found in perceived family support, $\beta = -1.388$, $t(6) = -9.67$, $p < 0.001$. For Hispanic females, $\beta = 1.912$, $t(6) = 4.83$, $p < 0.001$, the variables of perceived support was statistically significant and explained almost 5% of the difference in depression levels.

The fifth model analyzed the effect the adolescent's relationship with her mother had on racial differences in depression. A Black female adolescent's relationship with her mother slightly accentuated her level of depression and lost its statistical significance, $\beta = 0.260$, $t(3) = 0.97$, $p = 0.331$. A Hispanic female adolescent's relationship with her mother had a statistically

significant relationship with her level of depression, $\beta = 1.96$, $t(3) = 5.50$, $p < 0.001$, but only about 2.5% of the difference being explained.

Model six assessed the degree to which differences in self-perception variables account for racial and ethnic differences in depression. Once the variables of perceived intelligence and self-esteem were entered into the first model, it was found that the difference in depression levels for Black females was statistically significant and was accentuated, $\beta = 1.74$, $t(4) = 4.02$, $p < 0.001$, indicating an advantageous effect. Of the two variables, it appears that self-esteem levels, $\beta = -0.740$, $t(4) = -18.34$, $p < 0.001$, once again had the greater protective effect against depression than perceived intelligence, $\beta = -0.461$, $t(4) = -4.72$, $p < 0.001$. For Hispanic females, $\beta = 1.238$, $t(4) = 4.41$, $p < 0.001$, the variables of self-perception were significantly related to depression and actually explained 13% of the differences in depression levels.

The seventh model analyzed the effect adolescents' active coping skills had on racial differences in depression. The active coping skills of Black females saw a non significant increase in their levels of depression, $\beta = 0.289$, $t(3) = 1.09$, $p = 0.277$. For Hispanic females, active coping skills had a significant relationship with their depression levels, $\beta = 1.963$, $t(4) = 5.60$, $p < 0.001$, but they only accounted for about 2.5% of the difference.

Model eight assessed the degree to which differences in future expectations variables account for racial and ethnic differences in depression. Once the variables of college and survival expectations were entered into the first model, it was found that the depression level for African American females showed a statistically non-significant decrease, $\beta = -0.113$, $t(4) = -0.44$, $p = 0.611$. These variables also pointed towards a statistically significant disadvantage that accounted for 33% of the difference for Hispanic females, $\beta = 1.341$, $t(4) = 3.93$, $p < .001$.

The ninth and final model included each of the previous aforementioned eight categories. Once the variables from all of the categories were entered into the first model together, there was a non significant increase in the level of depression for Black females, $\beta = 0.326$, $t(19) = 1.16$, $p = .248$. Also, there was a significant relationship between the variables and depression with 46% of the difference in depression for Hispanic females also being explained, $\beta = 1.078$, $t(19) = 2.97$, $p = .003$.

Discussion

The purpose of the present research was to investigate the potential existence of differences in an adolescent's access to protective resources depending upon his or her race. The likelihood of the appearance and frequency of certain factors in particular ethnicities was also explored. It was hypothesized that youth in the ethnic majority would have more access to certain protective resources than ethnic minority youth. It was also predicted that youth in the ethnic minority would also be more likely to have greater access than White youth to other resources. In essence, there would be a difference in the access to resources among races. The final hypothesis predicted that those protective factors that ethnic minority youth had less access to would prove to be the mechanisms that explained their depression levels to a greater degree than for White youth. All of these hypotheses were supported.

The results indicated that there were several protective factors that occurred more frequently in the ethnic minority of youth. For example, Black adolescents actually possessed a significantly higher access to the following protective variables: perceived adult and family support, perceived intelligence and self-esteem, active coping skills, and college expectations. Hispanic adolescents scored significantly higher in their relationships with their mothers. White adolescents had a surprisingly less number of protective factors than African Americans

including their parents' higher education level, living in a two biological parent household, living in a two parent household, greater perception of peer support, and higher survival expectations. To summarize, it appears to be that Black adolescents were more advantaged overall on perceptual protective factors such as self-esteem, perceived support, etc., and White adolescents, in turn, were advantaged on structural variables such as welfare, unemployment, and household type. In terms of risk factors, Hispanic adolescents and their families were more likely to be on welfare or suffer through unemployment. Black adolescents were significantly more likely to be living in a household on welfare and that was headed by a single mother; white adolescents were the most likely to be raised by a single father. Therefore, the prediction that there would be a difference in the occurrence of risk and protective factors across races was substantiated.

Hispanic adolescents were found to be depressed at statistically significant higher levels than Black and White adolescents, respectively. This finding replicated those by Grunbaum et al. (2004) that found Hispanic adolescents to be more depressed than Black and White youth. After learning that there were in fact significant differences in the levels of depression between races, the next steps were to discover the possibility of certain risk and protective factors affecting depression levels for specific races.

Receipt of welfare and unemployment were risk factors in which Black and Hispanic youth were disadvantaged since they were more likely to receive it. With regards to household type, both minorities were more disadvantaged overall, but White adolescents were more likely to live in the least conducive environment of living with a single father. Nevertheless, White teenagers were also more likely to experience the most potent protective factor of living in a household with two biological parents present. However, even though White adolescents were more likely to live in a more protective family environment, they actually perceived they were

receiving less family support regardless of the type of household in which they lived. Therefore, even though Hispanic and Black adolescents were less likely to have two parents in a household, they perceived a greater amount of support from the family that did surround them. This could be due to the cultural importance placed on the family and its connections in both the African American and Hispanic traditions. With that said, it is interesting to point out that even though Hispanic adolescents were significantly more likely to experience a closer relationship with their mothers, that relationship did not have a particularly noteworthy effect on their levels of depression. Therefore, perhaps there is an additional aspect of family support that needs to be considered. There is the possibility that presence of the extended family, such as grandparents, aunts, uncles, etc. in the family's residence that contributes to the advantageous effect of family support found for minorities.

Another protective category that was more frequent and advantageous for minorities was of self-perceptions, specifically self-esteem. High levels of self-esteem for both males and females, more so than perceived intelligence, protected against higher levels of depression. Unfortunately, even though African Americans were more likely to have higher college expectations than any other race, these expectations did not provide any sort of protection against depression. It appeared that when college and/or survival expectations were low, both Hispanic and African American adolescents were more depressed.

Even though there are several models in which to provide a theoretical background for resilience research, the present results provide evidence that the challenge model should be considered a front runner for such a task. As previously mentioned, the challenge model posits a curvilinear relationship for risk factors that maintains that it is actually more beneficial when trying to reduce a negative outcome to be exposed to a small amount of risk rather than face no

exposure to it at all. The present results demonstrate the beneficial aspects of being subjected, within reason, to those environments that one may deem to be a risk factor. For example, even though minority youth were most likely to live in the more disadvantaged single parent families, they were also more likely than the more advantaged White adolescents to believe that they were receiving more support from their families. Therefore, a small amount of risk proved to more beneficial in the sense that it led to minorities maximizing the amount of support they did receive from the family that was present in their households. In essence, the challenge model demonstrates the importance of being exposed to risk in order to be able to know how to protect against it.

Limitations of the present study that may have influenced the results include the acknowledgment that this study was conducted with secondary data. Even though the National Longitudinal Study on Adolescent Health is a nationally representative and comprehensive survey of adolescents' attitudes and behaviors, its survey status made it impossible to draw causal connections. Since there was no experimental manipulation, the researcher could only speculate on associations. Of course, it would be impossible to randomly assign adolescents to their race and unethical to randomly appoint them to be on welfare, etc. Therefore, a non-experimental study is probably the best approach available for this topic of research. Also, the lack of a unified definition and theory of resilience may prove detrimental to the applicability of the results across similar areas of research. For example, the researcher's definition of self-competence may differ from other illustrations of how it has been defined in previous texts. Therefore, as is the case for those variables that are not easily defined or directly observable, the construct validity of the measures is questionable.

Directions for future research may look to determine whether the effects of these differences vary by race. Now that evidence has proven that certain protective factors are more likely to occur in certain races, future directions should look to develop this finding and expand upon it. One could look to determine how, to what degree, risk and protective factors function differently across races. In essence, one could next explore the interactions between the differences and see how potent each variable is against depression for the specific races. For example, is there a certain protective factor that is particularly potent against risk factors with regards to depression for Hispanic or African American adolescents? Is an African American teen's amount of perceived support from his or her family enough to protect against depression? Since these factors proved to be particularly advantageous, it would also be especially interesting to apply this analysis to self-esteem and the relationship between household type and perceived support for minority youth.

For a broader application of these findings, one could incorporate the results from the present research and apply them to the treatment of depression in adolescents across races. One way to do so would be to continue this research in the aforementioned context and expand into other ethnicities and cultures, such as Asian, Middle Eastern, etc. Once these differences and results were attained, one could look to those variables that seemed to be most effective for each race in protecting against depression and construct therapies that play to these advantages. On the flip side, clinicians can also recognize which risk factors actually exacerbate depression and develop counter methods or solutions to combat their effects. Once these therapies, methods, and models are created, research could also be done to demonstrate whether or not they achieve their desired efficacy for the specific races involved. Regardless of the means in which results and interventions are produced, it still stands as crucial that treatment for adolescent depression is

fashioned. The potential long term negative effects on multiple facets of one's future life as an adult provides just a few of the reasons in which it is so imperative that this type of research continues. Depression can affect one's social, emotional, financial, and biological aspects of life to varying degrees of intensity. The fact that it is also the most common mental health issue among youth reveals that it is a problem that will most likely continue into the future. Therefore, any insight into what protects against the often debilitating effects of depression would be most welcomed by clinicians, youth, and families alike.

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There has been no change of location for the author.

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Table 1

Mean Differences of the Dependent Variables as Divided by Race

Variables	Total	White	Black	Hispanic	t-tests
Self-Efficacy	3.8755	3.8679	4.0655	3.5565	b>w>h
Closeness and Caring	4.5230	4.5105	4.5608	4.5105	b>w,h
Relationship with Mother	1.7869	1.7976	1.6993	1.8623	h>w>b
Total Mother Relationship	3.0033	3.0039	2.9709	3.0389	h>w>b
Active Coping	15.170	15.006	15.543	15.217	b>h>w
Self-esteem	16.364	16.267	16.892	16.032	b>w>h
Adults Care	4.3768	4.3802	4.4354	4.3093	b>h,w
Teachers Care	3.5523	3.5537	3.5628	3.5213	
Friends Care	4.2442	4.3379	4.0881	4.1401	w>b,h
Family Support	3.7631	3.7476	3.8307	3.7603	b>w,h
Perceived Support	3.9102	3.9180	3.9311	3.8781	
College Expectations	4.2984	4.2927	4.3779	4.1012	b>w>h
Survival Expectations	4.3655	4.4747	4.1871	4.1940	w>h,b
Welfare	0.0916	0.0567	0.1504	0.1610	h,b>w
Unemployment	0.0875	0.0794	0.0896	0.1211	h>b,w
Parents' Education	13.963	14.257	14.157	11.765	w,b>h
Biological Parents	0.52429	0.5975	0.3372	0.4926	w>h>b
Two Parents	0.14145	0.1533	0.1225	0.1292	w>b
Single Mom	0.24108	0.1691	0.4210	0.2705	b>h>w
Single Dad	0.03429	0.0376	0.0258	0.0350	w>b
Other Parents	0.05889	0.0425	0.0935	0.0727	b,h>w
Depression	-0.0577	-0.5312	0.151	1.356	b,h>w

N (White) = 3856, N (Black) = 1551, N (Hispanic) = 743

t-tests represent statistical significance at the 0.05 level

Table 2

Regression Coefficients of Risk and Protective Factors by Race for Male Subjects

Category	Variable	Model #1	Model #2	Model #3	Model #4	Model #5	Model #6	Model #7	Model #8	Disadvantaged	Advantaged	Model #9
Race	Black	0.819* (0.232)	0.630* (0.253)	0.469 (0.242)	0.911* (0.225)	0.805* (0.238)	1.06* (0.219)	0.806* (0.232)	0.515* (0.227)	0.225 (0.257)	1.101* (0.218)	0.538* (0.252)
	Hispanic	1.46* (0.295)	0.926* (0.332)	1.36* (0.294)	1.38* (0.285)	1.39* (0.306)	1.24* (0.281)	1.50* (0.296)	0.990* (0.288)	0.793* (0.324)	1.199* (0.278)	0.744* (0.317)
Family Background	Welfare		0.744* (0.361)							0.33 (0.359)		0.572 (0.347)
	Unemployment		0.406 (0.335)							0.264 (0.326)		0.364 (0.316)
	Parents' Education		-0.182* (0.036)							-0.054 (0.037)		-0.066 (0.036)
Household Type	Bio Parents			-2.36* (0.465)						-1.296* (0.538)		-1.28* (0.563)
	Two Parents			-1.76* (0.505)						-0.763 (0.571)		-1.06 (0.590)
	Single Mom			-1.54* (0.481)						-0.903 (0.549)		-1.03 (0.570)
	Single Dad			-0.790 (0.631)						-0.194 (0.701)		7.19E ¹³ (4.34E ¹⁴)
	Other Parents											
Perceived Support	Adults Care				-0.507* (0.123)						-0.377* (0.119)	-0.247 (0.131)
	Teachers Care				-0.228* (0.102)						-0.057 (0.100)	0.052 (0.109)
	Friends Care				-0.309* (0.122)						-0.120 (0.119)	-0.085 (0.127)
	Family Support				-1.03* (0.129)						-0.716* (0.128)	-0.813* (0.144)
Relationship w/Mother	Mother Relationship					0.925* (0.284)						-0.187 (0.296)
Self-Perceptions	Perceived IQ						-0.388* (0.081)				-0.377* (0.081)	-0.214* (0.091)
	Self-Esteem						-0.589* (0.038)				-0.453* (0.041)	-0.452* (0.046)
Active Coping	Active Coping							-0.087* (0.035)				0.088* (0.037)
Future Expectations	College Expectations								-0.780* (0.088)	-0.640* (0.101)		-0.391* (0.103)
	Survival Expectations								-0.870* (0.107)	-0.937* (0.115)		-0.554* (0.116)
R ²		1.3%	3.0%	3.0%	9.6%	1.6%	12.6%	1.6%	8.6%	9.7%	15.5%	20.0%

* represents significance at 0.05 level

Table 3

Regression Coefficients of Risk and Protective Factors by Race for Female Subjects

Category	Variable	Model #1	Model #2	Model #3	Model #4	Model #5	Model #6	Model #7	Model #8	Disadvantaged	Advantaged	Model #9
Race	Black	0.226 (0.265)	0.235 (0.284)	-0.087 (0.272)	0.142 (0.255)	2.60 (0.268)	1.00* (0.250)	0.289 (0.266)	-0.113 (0.258)	-0.168 (0.287)	0.751* (0.251)	0.326 (0.282)
	Hispanic	2.01* (0.352)	1.29* (0.388)	1.87* (0.351)	1.91* (0.336)	1.96* (0.356)	1.74* (0.329)	1.96* (0.351)	1.34* (0.342)	0.992* (0.379)	1.722* (0.326)	1.08* (0.363)
Family Background	Welfare		0.610 (0.411)							-0.109 (0.406)		0.192 (0.391)
	Unemployment		1.14* (0.392)							0.961* (0.381)		0.984* (0.365)
	Parents' Education		-0.270* (0.041)							-0.151* (0.041)		-0.163* (0.041)
Household Type	Bio Parents			-1.62* (0.501)						-0.452 (0.583)		-0.628 (0.595)
	Two Parents			-0.480 (0.564)						0.133 (0.637)		-0.321 (0.641)
	Single Mom			-0.363 (0.522)						0.298 (0.597)		-0.112 (0.606)
	Single Dad			0.963 (0.818)						1.483 (0.877)		-3.92E ¹⁵ * (1.72E ¹⁵)
	Other Parents											
Perceived Support	Adults Care				-0.637* (0.153)						-0.427* (0.149)	-0.321* (0.162)
	Teachers Care				-0.467* (0.122)						-0.317* (0.119)	-0.329* (0.128)
	Friends Care				-0.438* (0.149)						-0.277 (0.144)	-0.053 (0.159)
	Family Support				-1.39* (0.144)						-0.844* (0.146)	-0.759* (0.166)
Relationship w/Mother	Mother Relationship					2.21* (0.287)						0.325 (0.320)
Self-Perceptions	Perceived IQ						-0.461* (0.098)				-0.421* (0.097)	-0.067 (0.108)
	Self-Esteem						-0.740* (0.040)				-0.525* (0.045)	-0.480* (0.050)
Active Coping	Active Coping							-0.211* (0.044)				0.0533 (0.045)
Future Expectations	College Expectations								-1.10* (0.118)	-0.884* (0.133)		-0.398* (0.135)
	Survival Expectations								-1.29* (0.130)	-1.222* (0.138)		-0.763* (0.138)
R ²		1.3%	4.4%	2.9%	12.9%	3.8%	15.4%	2.1%	9.4%	10.9%	18.9%	22.4%

* represents statistical significance at the 0.05 level