

Ethnic Differences in the Risk Assessment of Chronic Violence: Building Risk and Resilience Models for African American and White Youth

Eric Johnson*, April Harris-Britt

Department of Psychology, Fielding Graduate University, 2020 De La Vina St, Santa Barbara, CA 93105, Spain

ABSTRACT

While a great deal of research has been conducted on the risk and resilience factors in youth, there is limited research on the differences in these factors between cultures, ethnicities, and gender. The current researcher hoped to provide documentation of the different risk and resilience factors for White, Latino, and African American male and female youth, towards the goal of presenting solutions to youth violence in all groups. By determining ethnic differences in risk and resilience factors, it should be possible to give them appropriate weights within the CARE-2 assessment, thus reducing bias and increasing predictability of future chronic violence. By accurately predicting which youth are most likely to become violent based on risk factors, preventive measures can be put in place to minimize incidents of violence among high-risk youth.

Keywords: Youth violence; At-risk youth; Risk assessment; Latino-specific violence; CARE-2 assessment tool; Risk factors; Resilience factors

INTRODUCTION

Prior literature indicates a need to further examine ethnic differences in risk and protective factors for future violence among adolescents in the United States. In the proposed study, it was the purpose of this researcher to begin to explore differences in violence among ethnic groups and identify differences among these groups in risk and protective factors for future violence. While there is ample available literature that refers to differences in risk factors in various ethnic groups, there is a gap in the literature pertaining to what these differences are, and how best to address these risk factors in an attempt to counteract the seeming increased inclination towards violence in the affected groups [1-5].

The current literature indicates that both African American and Latino groups show an increased risk of violence during adolescence and through adulthood [6]. In many cases, this violent activity leads to incarceration or death, which explains the higher prevalence of members of these groups who are currently in prison, on parole, or were killed during the commission or as the result of a violent crime [6]. Understanding that these issues exist is only one part of a larger issue; determining how to counteract these problems should be the ultimate goal, which further research into the differences in risk among the affected groups could help to accomplish [7].

Cultural factors in risk and resilience assessment

Prior literature indicates a need to further examine ethnic differences in risk and protective factors for future violence among adolescents in the United States [6]. In the proposed study, it was the purpose of the researcher to explore differences in violence among ethnic groups and

genders, and to attempt to identify differences among these groups in risk and protective factors for future violence.

Certain ethnic groups, such as Hispanic and African American adolescents, have a much higher risk of involvement in various forms of violence, and also a higher rate of incarceration [8]. Researchers have found homicide to be the leading cause of death in African American adolescents, the second leading cause among Latinos, and the third leading cause in Native Americans [8]. When questioned by medical personnel, three-fourths of urban youth presenting to an emergency department reported recent peer violence [9]. This could be explained by the stress of living in an urban area, where violent crime is a more present factor, and also to the effects of discrimination and oppression in youth who live in urban areas, who tend to be of minority ethnicities [10]. An estimated 79% of all violent crimes occur in urban communities [10]. Approximately 80%-90% of urban youth also have either witnessed or been the victim of violence, which increases the likelihood of these adolescents having increased aggression and perpetrating violence themselves as they change from the victim to the victimizer [11].

Researchers have identified oppression and discrimination to be risk factors for future violence in both African American and Latino youth [2]. Researchers have shown that internalizing racist attitudes, which are common among African American youth, can lead to mutual disrespect, internal communal conflict, and "Black-on-Black" violence [11]. However, researchers who focus on self-esteem have found that African American youth who feel a strong belonging to and pride in their ethnic identity have a higher level of self-esteem [2]. In the case of African Americans, self-esteem can be seen as a resilience factor [2].

Correspondence to: Eric Johnson, Department of Psychology, Fielding Graduate University, 2020 De La Vina St, Santa Barbara, CA 93105, Spain, Email: ejohnson@cmwsneuralinstitute.com

Received: March 16, 2021; **Accepted:** March 31, 2021; **Published:** April 7, 2021

Citation: Johnson E, Britt HA (2021) Ethnic Differences in the Risk Assessment of Chronic Violence: Building Risk and Resilience Models for African American and White Youth. *J Foren Psy.* 6:166.

Copyright: © 2021 Johnson E, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Predicted that African American youth with a strong ethnic identity would not have as many negative feelings towards their group, which in turn would result in a decrease of negative and dehumanizing views of other African Americans, which would then lessen the incidence of Black-on-Black peer violence [12]. Having a strong ethnic identity and higher self-esteem is also linked to having better coping and problem-solving strategies [2], which also lessens the incidence of violent behavior [12].

Researchers have shown that prior protective factors among Latinos, including acculturation and speaking Spanish at home, are important in predicting future violence, and that they can act as risk factors, not as resilience factors [3]. Studied adolescent boys of various Latino ethnicities, African Americans, and Whites to compare risk and resilience factors, and found that Whites had the lowest risk of becoming involved in violent activity, while Latinos from Puerto Rico had the highest. They also found that Cuban and White adolescents who lived in single parent households or who did not live with their parents had a higher risk for severe violent behaviors than their counterparts who lived in two-parent households [1]. This study highlights the necessity of doing more research on the various Latino ethnic groups, and not treating them all as being interchangeable [1].

In another study, Shetgiri et al. [4] examined risk and resilience factors common in the Latino community. As opposed to other minority populations, they found high levels of parental involvement and belonging to peer groups to be risk factors for future violence and not protective factors, as is common in the youth of other nationalities [4]. This could be attributed to the fact that parental involvement might serve to inhibit Latino adolescents from seeking help outside of their immediate community because of a distrust of outsiders [5]. Latinos with large peer groups were also more prone to become involved in gang activities and other criminal behavior [5]. However, for Latino youth, becoming involved with people outside of their immediate community can be a mitigating factor that inhibits violence, while relying primarily on family and peers from the community can lead to increased acts of violence [5].

Implications of research in various settings

Various researchers and assessments focus on assessing risk and resilience factors in specific settings, such as at home, at school, or in a residential setting such as a juvenile justice facility or psychiatric hospital. It is important to understand that data received in these settings are not interchangeable; some are very specific to the area in which the data were collected. Therefore, it is necessary to look at research from a variety of settings to fully understand risk and resilience factors among the youth of various ethnicities and cultures.

The school system

From the time children are approximately 5 or 6 years old, the majority of their waking day is spent at school; understanding the risk and resilience factors that they face there is very important. School is also where children are most likely to meet and choose their peers, and spend a great deal of time with them. For this reason, most research focusing on risk assessment of violence in the school setting focuses on the formation of peer groups, whether these groups are positive or negative, and whether there is any gang affiliation or other violence-related activity in the peer group [13].

Researchers who focus on solutions to violent behavior in the school system often cite programs that address youth risk factors in a school environment [14]. The majority of these programs focus on children or adolescents who already have a history of violence, have known risk

factors for violent behavior, or have been incarcerated for committing a violent crime in the past [15]. In the current study, the researcher considered risk and resilience factors in youth who had not yet been identified as being high risk for committing a violent crime.

The juvenile justice system/psychiatric facilities/drug and alcohol treatment facilities

Researchers studying youth in a residential facility are by necessity focused on children who had already been shown to be at high risk of committing a violent crime, and thus tended to focus on avoiding recidivism in those who have already offended [16]. While this research might be somewhat limited, it is still important in determining risk and resilience factors in youth who might be high risk, but who have not yet offended [10,17]. These studies are also useful in determining the effects of psychiatric illnesses or sociopathology in the committing of violent crime [18,19].

The home and family environment

While the quality of a child or adolescent's home environment and parental involvement has various results depending on culture or ethnicity, it is important to examine factors within the home that have been shown to increase the risk of violent activity or the risk of becoming a victim. Multiple researchers have shown a correlation between being the victim of or witnessing violence in the home to later acts of violence or becoming revictimized [20,21]. It is also important to study the cultural differences that are considered to be risk or resilience factors in the household. For instance, as previously discussed, while parental involvement is seen as a resilience factor in most cultures, in Latino households, it can be seen as a risk factor [3].

Other factors that must be considered when determining the effect children's or adolescents' home environment are whether they are socioeconomically stable or live in poverty, and whether they live in an impoverished neighborhood, whatever their financial situation might be. Researchers have shown an increase in violent behavior in urban, impoverished areas, which crosses all cultural and ethnic barriers [17,22].

The implications of research on resilience

While the majority of assessments and most researchers focus on risk factors to the exclusion of resilience factors, resilience is an important concept to both do further research on and to understand in studies of risk and resilience. Resilience can work in direct opposition to risk factors; some youth who would seem to be at an extremely high risk of committing violent crimes seem to be able to counter the risk by drawing on their resilience factors [23,24]. It is also necessary to consider factors that increase resilience in children, such as temperament, a healthy sense of esteem, pride in one's heritage, or a supportive peer or family [25]. By including these factors in the current study, hopefully, there would be much to add to the existing research concerning risk factors and resilience factors in different ethnicities, genders, and cultures.

By studying various ethnic and culture groups and both genders, it should be possible to determine differences in risk and resilience factors in the various groups. The current trend of risk assessment is to obtain helpful information necessary for risk reduction. It was the hope of the researcher to obtain new information in regards to differences in risk and resilience of different genders and different ethnic groups that would allow for more eloquent risk assessments that would better inform risk reductions methods.

Hypotheses 1 and 2

H1: The risk factors of the CARE-2 model vary in their ability to

predict the risk of chronic violence between African American and White youth.

H2: The resilience factors of the CARE-2 model vary in their ability to predict risk of chronic violence between African American and White youth.

METHODS

Participants

Participants (N=2,116) for the current study were taken from an existing Child and Adolescent Risk Evaluation 2nd Edition Assessment (CARE-2) database, which a behavioral health clinic in the mid-Atlantic Region of the East Coast of the United States established in 2003. The original database for the CARE-2 was created for sampling purposes, and to establish weights for individual risk and resilience items. The CARE-2 database contains data from adolescent clients ages 6-19, with signed consents from the clients' guardians. Clinicians filled out a CARE-2 assessment one time for each of their youth clients between the ages of 6-19. Sample sizes broken down by ethnicity group included African American (n=724), Latino (n=101), White (n=1,153), and other ethnicities not studied (n=138).

Data collection procedures

The researcher obtained data for the current study from the existing CARE-2 archival database located within a behavioral health clinic in the mid-Atlantic Region of the East Coast of the United States, which included over 70 variables collected from individuals, including demographics used for group variables; historical behavior items; historical family items; historical substance abuse and neurological items; recent mental health, behavioral, skill, and education items; and resiliency factors.

The researcher collected data from children and adolescents in outpatient treatment programs, residential settings, juvenile detention settings, group home facilities, and school settings. Of the outpatient group, approximately one third were court-involved. For comparison purposes, the researcher also collected data from a subset of youth with no reported behavioral problems. The main locations for data collection were the Mid-Atlantic and Midwestern regions of the United States.

Inclusion criteria

The researcher used archival data for the current study, collecting data from participants who were invited to take part in a prior study for the CARE-2 if the following standards were met: obtained consent from guardian(s), and the individual was an adolescent between the ages of 6 to 19. The researcher excluded participants from the prior study if they were under the age of 6, over the age of 19, or did not fill out pertinent information to identify ethnicity or gender. If there were missing data within the Historical Family Items section of the CARE-2 or the individual refused to participate at the time of data collection, the researcher excluded him or her from the prior study.

Measures

Demographic factors: Demographic data for the current study included gender, age, and ethnicity, which the researcher collected from client records within the clinic with guardian consent via a signed consent.

Risk assessment: The CARE-2 assessment is one of the premier predictors and reduction of youth violence tools available and aims to identify youth who are at risk for violence and to identify specific interventions needed to prevent any future risk of aggressive behavior.

The CARE-2 tool examines the factors previous researchers have identified that may be affecting the child's or adolescent's development, and allows for a risk reduction plan to be put in place for the youth to mature into a positively pro-social functioning member of society. The standard for the predictive validity of risk assessment tools should range between 75%-85% receiver operating characteristics (ROC) [26]. The CARE-2 has a predictive validity of 0.75-0.94 for future violence ROC for males, and 0.67-0.97 ROC for females; this puts the CARE-2's predictive validity above the Structured Assessment of Violence Risk in Youth (SAVRY), Psychopathy Checklist: Youth Version (PCL-YV, male), Positive Achievement Change Tool (PACT), and Level of Service/Case Management Inventory (LS-CMI) [26].

The CARE-2 items are divided into historical items (happened any time in the youth's lifetime), and recent descriptors (occurred in the last 6 months). Additionally, there are static items that are historical and cannot change, and dynamic factor items, such as skill proficiency and resiliency factors, that can change over time. Categorically, there are items related to (a) behavior, (b) family characteristics, (c) neurological and substance abuse, (d) mental health, (e) skill and educational factors, and (f) resiliency factors. When constructed, the CARE-2 was atheoretical, but resilience factors were expected to have a moderating effect on risk factors' overall contribution to future violence. The CARE-2 is designed to collect data on specific behaviors or individual characteristics associated with each of the categories. Each specific behavior or individual characteristic is further categorized as either a risk or protective factor. There are 44 risk factor items, with each item given a weighted score. The weighted item scores are added together to calculate a total risk score. There are 13 resiliency items, with each item given a weighted score. The weighted scores of the resiliency factor items are then added together for a total resiliency score. The total resiliency score is then subtracted from the total risk score to calculate whether the test-taker is at no, mild, moderate, or high risk of future violence. No risk scores range from 0-20 for preteen males and 0-20 for teen males. For preteen females, 0-39, and teen females 0-29 indicate no risk for chronic violence. Mild risk scores range from 21-57 for preteen males and 21-57 for teen males. For preteen females, 40-62, and teen females 30-61 indicate a mild risk for chronic violence. Moderate risk scores range from 58-65 for preteen males and 52-63 for teen males. For preteen females, 63-100, and teen females 62-84 indicate a moderate risk of chronic violence. Finally, high-risk scores range from 66+ for preteen males and 64+ for teen males. For preteen females, 101+, and teen females 85+ indicate a high risk for chronic violence. An example of a resilience item would be positive school experience, which adds a +2 to the resilience score due to weight. An example of a risk item would be chronic school behavior problems, which scores a +3 for preteen males, +2 for teen males, +3 for preteen females, and +4 for teen females due to score weight.

The CARE-2 is a combination risk and treatment needs assessment, delineating the estimated short-term risk for violence and the treatment and structure needs of the client. It can also be used for youth ages 6 to 19. Additionally, the youth studied exhibited a full range of behavioral problems. One unique feature of the CARE-2 is that interventions are listed with each item of the instrument. The risk score states that the youth is not, mildly, moderately, highly, or very highly similar to youth with a history of chronic assaults (three or more) on others. The scaling was made using means, standard deviations, and scatter plots of the group being evaluated. Youth who are highly similar to young people with a record of chronic assaults (more than three) are two standard deviations above the mean for the total group. The mean for the low-risk group is two standard deviations below the mean for the total

group. The not similar group had no history of assault. The moderate group contained both youths with and without histories of assaults. The highly and very highly similar groups contained only youth with histories of chronic assaults.

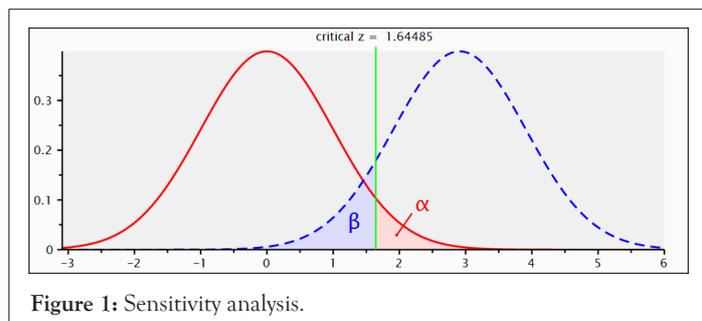
Statistical analysis

The original proposed analysis for testing the study’s hypotheses and model was partial least squares structured equation modeling (PLS-SEM) using SmartPLS software [27]. PLS-SEM would be used for creating several latent constructs for risk and resilience from the CARE-2 items, but this was fraught with issues, most importantly that this is not how researchers currently conceptualize the CARE-2. The CARE-2 does not consider a latent structure, and examining a latent structure was not the intent of the study. It was also considered to possibly reconceptualize the model for the CARE-2 to a moderating model, and explored results of this option, but the researcher did not pursue this option for the focus of the current analysis.

The researcher performed a second analysis using Spearman’s rho nonparametric correlations (2-tailed) in SPSS, followed by a test of group differences of correlations using a web interface calculator. The researcher used Spearman’s correlations to determine the strength and direction of the monotonic relationship between previously weighted risk and resilience factors within the CARE-2, and a binary criterion variable that represented the behavior being predicted: chronic assault. The researcher used Cohen’s rule for effect size, with .5 as large, .3 as moderate, and .1 as small.

Sensitivity analysis

The researcher determined sensitivity analysis for Spearman’s rho non-parametric correlation using G*Power 3.0.10. The researcher conducted sensitivity analysis using an alpha of 0.05, a power of 0.80, for a two-tailed Z test. Using the African American group sample (n=724) and White group sample (n=1,153) sensitivity analysis indicated that a small effect size (q=.13) could be detected with the current sample (Figure 1).



Sample

The current study has a sample size of N=2,116, which included several ethnic groups. For the manageability and scope of the current study, the researcher chose two racial groups of African American (n=724) and White (n=1,153) to compare for ethnic differences in risk and resilience factors from the CARE-2. The full sample met the sample size requirement calculated with the power analysis for the Spearman’s correlation analysis.

Data preparation

The researcher imported the data into SPSS via an Excel file exported from CARE-2 system’s online database. Several items did not have a scored weight associated with them within the CARE-2 assessment, so

the researcher gave them a score of 1 so that he could analyze the items. The researcher deleted items 1a, no history of behavior problems, and 28a, good problem-solving skills, from the data due to not being risk factors. Both items can also be found as resilience items later in the CARE-2 assessment. The researcher also deleted item 17, as it is a combination of other risk items that were already being analyzed.

Criterion variable

The researcher created the criterion variable from item 2d, chronic assaults, as this item reflected the behavior being predicted. The researcher transformed the item into a binary variable for analysis.

RESULTS

Item significance

The researcher performed an item level analysis with Spearman’s rho nonparametric correlations in SPSS to determine risk and resilience factors’ significance among groups. The researcher will show and discuss significance results below.

All items not listed in Table 1 were significant for the whole group, African American group, and White group. The majority of items in the CARE-2 were significant, with only a small number of items that were not significant split between the three groups. Item 11a, attachment problems, was the only item that was not significant across groups. Full table results can be found in Appendix A.

Table 1: Spearman’s rho nonparametric correlations w/criterion variable.

	Whole group	African American	White
Items	Spearman’s correlation	Spearman’s correlation	Spearman’s correlation
11a	-0.01	0.01	-0.02
21	-0.03	.08*	-.08**
24	0.07	0.03	.07*
28b	.10**	.12**	0.06
38	.13**	0.06	.13**
43	.06**	.12**	-0.01
53	.07**	.11**	0.02
56	.09**	0.06	.10**

Note: * <.05, ** <.01, *** <.001 (2-tailed)

For the full sample, items 11a, attachment problems; 21, has been bullied by peer, and 24, psychiatric symptoms, were not significant. For the African American group, items 11a, attachment problems; 24, psychiatric symptoms; 38, learning problems; and item 56, caregivers supportive of treatment, were not significant. For the White group, items 11a, attachment problem; 28b, deficient problem-solving skills; 43, motions poorly regulated; and 53, relates positively to pro-social peers, were not significant.

It is important to note that results seen in Table 2 for group differences in item significance/non-significant can account for items not being significant within the whole group, as with items 21, has been bullied by peers, and 24, psychiatric symptoms. A small positive correlation for the African American group and a small negative correlation for the White group lead to a canceling out of these effects for the whole sample, leading to a non-significant correlation for the full sample. Furthermore, this should illustrate the need to include all risk and resilience items with analysis of group differences until all ethnic, gender, and age differences can be accounted for in future research.

Table 2: Spearman’s rho nonparametric correlations w/criterion variable.

Item	African American Spearman’s correlation	White Spearman’s correlation	AA/White Group differences
1c	-.36***M↑	-.24***S	0.13
2b	.09*S	.19***S↑	0.1
12	.11***S	.24***S↑	0.14
21	.08*S↑	-.08*S	.16↑
26	.30***M↑	.18***S	0.09
30	.36***M↑	.27***S	0.1
34	.37***M↑	.24***S	0.13
42	.09*S	.20***S↑	0.11
43	.12***S↑	-.01	0.12
44	.20***S↑	.06*S	0.14
47	.25***S↑	.11***S	0.14

Note: * <.05, ** <.01, *** <.001 (2-tailed)

Key	Not significant	Grey
	.L	Large effect
M	Medium effect	
S	Small effect	
↑	Largest effect	

Item 24, psychiatric symptoms, was significant for the White but not for the African American group. Item 28b, deficient problem-solving skills, was significant for the African American group, but not for the White group. However, the effect size was small for the African American group, and this item was not significant for group differences. Item 38, learning problems was significant for the White group, but not for the African American group. However, the effect size was small for the White group, and this item was not significant for group differences. Item 43, emotions poorly regulated, was significant for the African American group, but not for the White group. However, the effect size was small for the African American group, but this item was significant for group differences, which the researcher will discuss later. Item 53, relates positively to pro-social peers, was significant for the White group, but not for the African American group. However, the effect size was small for the White group, and this item was not significant for group differences. Item 56, caregivers supportive of treatment, was significant for the African American group but not for the White group. However, the effect size was small for the African American group, and this item was not significant for group differences.

Significant group differences

The researcher performed an item level analysis with Spearman’s rho nonparametric correlations in SPSS, followed by calculations to determine between-group significant differences of correlations.

CARE-2 item analysis

Spearman’s rho nonparametric correlation SPSS output and test for group differences confirmed the first hypothesis: The risk factors of the CARE-2 model vary in their ability to predict risk of chronic violence between African American and White youth, with significant differences between groups found with risk items including 1c, 2b, 12, 21, 26, 30, 34, 42, 43, and 44. For the second hypothesis: There was significant between-group difference with resilience item 47; however, the researcher only found one resilience item to be different. One difference in resilience may have been due to the small number of resilience items, which seemed underdeveloped within the CARE-2 assessment. Also, currently there are no ethnic-specific resilience items developed for the CARE-2. The researcher will discuss each significant difference between group CARE-2 risk/resilience items below.

Risk factors

Spearman’s correlation results for item 1c, history of moderate behavior problems, was significant for group differences, with African Americans having a larger correlation. The African American group had a moderate effect size, while the White group had a small effect size. Both groups were negatively correlated, which may indicate that item 1c did not contribute to the risk of chronic violence for either group. Item 2b, history of severe behavioral problems, was significant for group differences, and effect size was small for both groups. The African American group had a relatively larger effect size, which would indicate that the African American group was more at risk for chronic violence when severe behavioral problems were present. Item 12, early abuse, was significant for group differences, and effect size was small for both groups. The White group had a larger effect size, which would indicate that the White group was more at risk for chronic violence when early abuse had occurred. Item 21, has been bullied by peers, was significant for group differences, and effect size was small for both groups. The African American group had a positive correlation, while the White group had a negative correlation, which would indicate that being bullied by peers is not a risk factor for chronic violence among the African American group. Item 26, runaway behavior, was significant for group differences. The African American group had a moderate effect size, while the White group had a small effect size, which would indicate that the African American group was more at risk for chronic violence if they were exhibiting runaway behavior. Item 30, favorable attitudes towards antisocial behaviors, was significant for group differences. The effect size was moderate for the African American group and low for the White group, which indicates that the African American group was more at risk for chronic violence when a favorable attitude towards anti-social behavior was present. Item 34, limited association with pro-social peers, was significant for group differences. The effect size was moderate for the African American group and small for the White group, which indicates that the African American group was more at risk for chronic violence when there was limited association with pro-social peers. Item 42, impulsivity, was significant for group differences and effect size was small. The correlation was greater for the White group, which indicates that impulsivity leads to great risk for chronic violence among the White group. Item 43, emotions poorly regulated, was significant for group differences. However, item 43 was only significant for the African American group, which had a small effect size, indicating that poorly regulated emotions did not increase the risk of chronic violence among the White group. Item 44, suicide risk (which in itself is a very complex issue), was significant for group differences and effect size was small for both groups. The African American group had a larger effect size, which indicates that a risk for suicide can increase the risk of chronic violence among the African American group.

Resilience factors

Spearman’s correlation results for item 47, appropriate parental discipline, were significant for group differences, and effect size was small for both groups. However, item 47 had a positive correlation for both groups, which would indicate that appropriate parental discipline was not a resilience factor for either group. Moreover, the African American group had a greater positive correlation, which indicated that appropriate parental discipline could become a risk factor for chronic violence at some point.

DISCUSSION

Cultural bias within the world of psychological assessment has been a focus of research since the 1960s. The reason for this investigation would be to recognize that various cultural factors might result in racial or ethnic differences in the assessment of risk and resilience to predict chronic violence. Threat assessments are often used within a forensic testing battery within court cases. Therefore, it is of great importance to ensure any prosecution based on psychological testing is rendered from information that is unbiased. In regard to the assessment of the risk of chronic violence of youth, an assessment tool that overestimates this prediction based on an individual's ethnicity could lead to negative consequences for the youth. Conversely, it would also be a problem to underestimate an individual's risk of chronic violence in that the youth is not receiving the appropriate treatment to lower that individual's risk of chronic violence. One of the approaches to fixing cultural bias proposed by Poortinga was to deal with this bias directly through identifying the bias statistically, and correcting the assessment tool so that it can meet psychometric standards of equivalence. In the current study, the researcher took the first step in identifying bias statistically between an African American and a White group within a sample of youth tested with the CARE-2 assessment for chronic violence.

It is important to highlight several differences found within the current analysis based on current research within the field. Within the current analysis, the African American and White groups were found to have no increase in resilience from appropriate parental discipline. Moreover, this could indicate that appropriate parental discipline, explained as not too lax or too strict could become a risk factor, especially for the African American group. Copeland-Linder, Lambert, and Jalongo explained that effective and more controlling parental practices are both adaptive and protective for African American youth within high-risk environments. It may be possible that controlling parental practices may help African American youth to recover from performing assaultive behavior [28]. Within the current analysis, the researcher found that those in the African American group had less risk for chronic violence than those in the White group due to early abuse. A combination of resilience factors, including Afrocentric beliefs, religiosity, and ethnic identity have been shown to decrease deviant behaviors among African American youth, which may explain the resilience to early abuse compared to the White group [29]. The current researcher also found that being bullied by peers was a low risk factor for the African American group, while those in the White group had a negative correlation, which could indicate a deficit of risk to becoming chronically violent. Those in the African American group could be more resilient to being bullied, as they did not have a negative correlation compared to the White group, due to unique resilience factors such as ethnic identity. Furthermore, if the bullying is in the form of racial discrimination, [30] considered self-esteem and ethnic identity protective factors. An explanation for the negative correlation of being bullied by peers on the risk of chronic violence within the White group may be found in the flight, fight, or freeze fear or stress response. Those in the White group may be more susceptible to the flight or freeze portion of the stress response to bullying [31]. However, due to the definition of resilience, or protective factors, being bullied by others would not fit into that category for those in the White group. In reference to item 30, researchers have found that corporal punishment leads to more anti-social behavior [32]. Furthermore, some found

that corporal punishment is especially prevalent among African Americans [33]. Corporal punishment among African Americans may explain findings in the current analysis in which those with favorable attitudes towards anti-social behavior are at a greater risk for chronic violence among the African American group than the White group.

The urban stress and mental health perspectives state that African American youth are at a higher risk of violence due to discrimination, racism, and stress-inducing factors such as class oppression, the proliferation of drugs, use of violence to resolve interpersonal conflicts, and that they also experience greater exposure to violence, which may explain increases in risk of chronic violence within the CARE-2 [10]. Poverty is one major risk factor for violence, especially for African American youth living in urban areas, which is not included in the CARE-2. Being exposed to this violence, whether one is the victim of the violence or a witness to another family member being victimized, greatly increases the risk that a young person will act out violently against others, both in relationships and in general [34]. This exposure can desensitize youth to violence, but could it possibly not only increase risk, but also change the threshold of how much overall risk results in violent acts [35]. Furthermore, the above risk factors could account for some results found within the analysis for the African American group (e.g., items 2b, 26, 34, 43, and 44), which are not directly reflected within the current research. Risk and resilience factors in White youth are not dissimilar to those seen in other groups, although this group is often overlooked in the literature [36]. However, White youth who are abused in the home are much more likely to either act violently towards others or to accept violence from others later in life, which could explain why those in the White group have an increased risk for chronic violence from early abuse within the CARE-2 data [37]. Furthermore, researchers have found that early childhood abuse is directly connected with impulsivity, which can account for the increase in risk for chronic violence among the White group within the current analysis [38].

There were also several CARE-2 items that had correlations in unexpected directions, such as risk items 21, early abuse; item 1c, history of behavior problems; and resilience item 47, appropriate parental discipline. The researcher discussed items 21 and 47 above. However, the researcher found item 1c to be negatively correlated with the risk of chronic violence, which indicated that it is not a risk factor for those in the African American or White groups. Moreover, this finding is not implicated in the current body of research, but may indicate a profile of risk that does not include moderate behavior problems. However, it is important to note that this may not be the case for other ethnic samples in future research.

Looking at the statistical capabilities of detecting chronic violence among youth, the study does not necessarily target predictability among ethnicities in the CARE-2 as the current study focused on weighted items. Further research would be needed with CARE-2 items stripped of weight and ROC statistical procedures. Moreover, the CARE-2's priority in risk reductions planning makes it an invaluable tool when dealing with violent youth. While considering guided risk assessment and risk reduction, the CARE-2 should be considered for practitioners dealing with violent youth.

Limitations of current research

A major limitation of this study was the ability only to test two racial groups. The United States is a melting pot of many cultures that may hold many differences in the assessment of chronic violence

in youth. The Latino population is ever growing within the United States, and is of great interest to this researcher. However, due to a small sample size that may be non-representative, the researcher eliminated the Latino sample from the current analysis. As the third largest population in the United States, the importance of unbiased measure for this population is of great concern [39]. In migration policy institute reported that Latino immigrants accounted for 38% of all immigrants coming to the United States. In regards to the current study, as mentioned in the ethical concerns, it is important that Latino youth are not being over- or undermeasured for risk of chronic violence as this brings concerns of legal consequences and under treatment for risk reduction [40].

Another limitation of the current study would be an increase in Type I error probability due to using multiple statistical tests without a statistical correction. However, due to the nature of item-level analysis and the analytical testing measuring statistical significance for each population and the group, Type I probability may be low.

It should also be noted that there are overarching limitations to the current state of risk assessment, which includes gender difference, ethnic differences, organization problems, poor resilience item development, and so on. These limitations should be taken into consideration when developing or editing risk assessment tools.

Future research recommendations

The current study investigated ethnic differences within the assessment of the risk of chronic violence within youth, which the researcher confirmed in both risk and resilience factors. The future research recommendation would be to strip the current weights found within the CARE-2 assessment data for both the African American and White samples. Once the weights are stripped, the data should be reanalyzed so that appropriate weights for both groups are found for each risk and resilience factor. The second research recommendation would be to analyze those in the African American and White groups by gender to find appropriate weights based on both ethnicity and gender. The third research recommendation would be to perform a Spearman's rho non-parametric correlation on the Latino sample to investigate ethnic differences in risk and resilience factors of the CARE-2. The fourth research recommendation would be to build new risk and resilience items and to reorganize the CARE-2 to accommodate for the five-group system to include individual, peer interaction, family, school, and community, to give a fuller picture of the individual being assessed [9]. Within this organization of the five-group system, the researcher also recommends to differentiate dynamic and static items to take into account factors in an individual, which might change on their own over time, or be altered through intervention so that the individual can be reassessed to show when risk has been reduced. The fifth research recommendation is to build new CARE-2 items that reflect ethnic-specific risk factors such as those found in the urban stress and mental health perspective, which argues that African American adolescents are affected due to discrimination, racism, and stress-inducing factors such as class oppression, the proliferation of drugs, and use of violence to resolve interpersonal conflicts (McGee, 2015). Items that reflect culturally specific resilience factors such as greater self-esteem in African American youth who feel a strong belonging to their ethnic identity should also be added to the CARE-2 [2].

CONCLUSION

In the current study, the researcher found that ethnic differences do exist for risk and resilience factors within the CARE-2 assessment of youth risk for chronic violence. Those in the White group had higher risk compared to those in the African American group for items 2b, 12, and 42. Those in the African American group had higher risk for chronic violence compared to those in the White group for items 1c, 21, 26, 30, 34, 43, and 44. Risk assessment has changed through its history with weighted systems, the addition of static and dynamic items, and even accommodations for gender differences. It seems rational that the evolution of risk assessment should continue with each generation of researchers to further refine risk and resilience factors, organization, risk reduction, and weight schemes to accommodate for individual differences. Future research should focus on cultural and ethnic differences coupled with gender differences of each subgroup to tease out any potential bias that could cause skewed overall risk results, especially in the forensic arena. Bias in risk assessment could cause harm to the individual being assessed by either overestimating risk with possible legal consequences, or underestimating risk when the individual needs risk reduction treatment.

REFERENCES

1. Estrada-Martínez LM, Padilla MB, Caldwell CH, Schulz AJ. Examining the influence of family environments on youth violence: A comparison of Mexican, Puerto Rican, Cuban, non-Latino Black, and non-Latino White adolescents. *J Youth Adolesc.* 2011 ;40(8):1039-1051.
2. Seifert SD, Watts R J. Ethnic identity in urban African American youth: Exploring links with self-worth, aggression, and other psychosocial variables. *J Community Psychol.* 2002;30(4):411-431.
3. Reingle JM, Jennings WG, Maldonado-Molina MM. The Mediated Effect of Contextual Risk Factors on Trajectories of Violence: Results from a Nationally Representative, Longitudinal Sample of Hispanic Adolescents. *Am J Crim Justice.* 2011;36(4):327-343.
4. Shetgiri R, Kataoka SH, Ryan GW, Askew LM, Chung PJ, Schuster MA. Risk and resilience in Latinos: A community-based participatory research study. *Am J Prev Med.* 2009;37(6):217-224.
5. Rodriguez MA, Brindis CD. Violence and Latino youth: Prevention and methodological issues. *Public Health Rep.* 1995;110(3):260-267.
6. Reed E, Lawrence DA, Santana MC, Welles CS, Horsburgh CR, Silverman JG, et al. Adolescent experiences of violence and relation to violence perpetration beyond young adulthood among an urban sample of Black and African American males. *J Urban Health.* 2014 ;91(1):96-106.
7. Bushman BJ, Newman K, Calvert SL, Downey G, Dredze M, Gottfredson M, et al. Youth violence: What we know and what we need to know. *Am Psychol.* 2016 Jan;71(1):17-39.
8. Dodge KA, Pettit GS. A biopsychosocial model of the development of chronic conduct problems in adolescence. *Dev Psychol.* 2003;39(2):349-371.
9. Stoddard SA, Whiteside L, Zimmerman MA, Cunningham RM, Chermack ST, Walton MA. The relationship between cumulative risk and promotive factors and violent behavior among urban adolescents. *Am J Community Psychol.* 2013 ;51(1):57-65.
10. McGee Z. Risk, protective factors, and symptomatology among urban adolescents: Findings of a research study on youth violence and victimization. *J Offender Rehabil* 2015;54(6):429-444.

11. Balkin RS, Miller J, Ricard RJ, Garcia R, Lancaster C. Assessing factors in adolescent adjustment as precursors to recidivism in court-referred youth. *Measurement & Evaluation in Counseling & Development*.2011 ;44(1):52-59.
12. Hollister-Wagner GH, Foshee VA, Jackson C. Adolescent aggression: Models of resiliency. *J Appl Soc Psychol*.2001;31(3):445-466.
13. Botvin GJ, Griffin KW, Nichols TD. Preventing youth violence and delinquency through a universal school-based prevention approach. *Prev Sci*. 2006;7(4):403-408.
14. Edwards OW, Mumford VE, Serra-Roldan R. A positive youth development model for students considered at-risk. *Sch Psychol Int*. 2007;28(1):29-45.
15. McGowan MR, Horn RA, Mellott RN. The predictive validity of the structured assessment of violence risk in youth in secondary educational settings. *Psychol Assess*. 2011;23(2):478-486.
16. Mulder E, Brand E, Bullens R, Van Marle H. A classification of risk factors in serious juvenile offenders and the relation between patterns of risk factors and recidivism. *Crim Behav Ment Health*. 2010;20(1):23-38.
17. Reingle JM, Jennings WG, Lynne-Landsman SD, Cottler LB, Maldonado-Molina MM. Toward an understanding of risk and protective factors for violence among adolescent boys and men: A longitudinal analysis. *J Adolesc Health*. 2013;52(4):493-498.
18. Garmezy N, Masten AS, Tellegen A. The study of stress and competence in children: A building block for developmental psychopathology.
19. Spain SE, Douglas KS, Poythress NG, Epstein M. The relationship between psychopathic features, violence and treatment outcome: The comparison of three youth measures of psychopathic features. *Behav Sci Law*. 2004;22(1):85-102.
20. Rutter M. Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *Br J Psychiatry*. 1985;147:598-611.
21. Zimmerman GM, Posick C. Risk Factors for and Behavioral Consequences of Direct Versus Indirect Exposure to Violence. *Am J Public Health*. 2016;106(1):178-188.
22. Swahn MH, Bossarte RM. Assessing and quantifying high risk: Comparing risky behaviors by youth in an urban, disadvantaged community with nationally representative youth. *Public Health Rep*. 2009;124(2):224-233.
23. Temple JR, Stuart GL. Risk and protective factor theory. *Encyclopedia of substance abuse prevention, treatment, & recovery*. *Public Health Nutr*. 2009;19(1):15-25.
24. Van Breda AD. Resilience theory: A literature review. *Curr HIV Res*. 2009;15(3):178-187.
25. Sugland BW, Zaslow M, Winqvist-Nord C. Risk, vulnerability, and resilience among youth: *J Rehabil Med*. 1993;44(5):385-395.
26. Seifert K. Research on youth violence risk/needs assessments. *J Psychol.Clin Psychiatry*.2015;3(1):1-6.
27. Hair Jr JF, Hult GTM, Ringle CM, Sarstedt M. A primer on partial least squares structural equation modeling. *N Engl J Med*. 2016;5(1):1711-1722.
28. Copeland-Linder N, Lambert SF, Jalongo NS. Community violence, protective factors, and adolescent mental health: A profile analysis. *J Clin Child Adolesc Psychol*. 2010;39(2):176-186.
29. Nasim A, Belgrave FZ, Jagers RJ, Wilson KD, Owens K. The moderating effects of culture on peer deviance and alcohol use among high-risk African-American Adolescents. *J Drug Educ*. 2007;37(3):335-363.
30. Tynes BM, Umaña-Taylor AJ, Rose CA, Lin J, Anderson CJ. Online racial discrimination and the protective function of ethnic identity and self-esteem for African American adolescents. *Dev Psychol*. 2012;48(2):343-355.
31. Del Giudice M, Ellis BJ, Shirtcliff EA. The Adaptive Calibration Model of stress responsivity. *Neurosci Biobehav Rev*. 2011;35(7):1562-1592.
32. Rebellon CJ, Straus M. Corporal punishment and adult antisocial behavior: A comparison of dyadic concordance types and an evaluation of mediating mechanisms in Asia, Europe, and North America. *Int J Behav Dev*.2017;41(4):503-513.
33. Simons LG, Simons RL, Su X. Consequences of corporal punishment among African Americans: The importance of context and outcome. *J Youth Adolesc*. 2013;42(8):1273-1285.
34. Hall CH. Kinship ties: Attachment relationships that promote resilience in African American adult children of alcoholics. *Adv Soc Work*.2007;8(1):130-140.
35. Seeley JJ. Violence in adolescents. *J Psychol.Clin Psychiatry*.2010;4(12):37-52.
36. Torres Stone RA, Meyler D. Identifying potential risk and protective factors among non-metropolitan Latino youth: cultural implications for substance use research. *J Immigr Minor Health*. 2007;9(2):95-107.
37. Youth Violence. CDCP.2012.
38. Gaher RM, Arens AM, Shishido H. Alexithymia as a Mediator Between Childhood Maltreatment and Impulsivity. *Stress Health*. 2015;31(4):274-280.
39. O'Conner L, Lubin G, Spector D. The largest ancestry groups in the United States. *Business Insider*.2013.
40. Migration Policy Institute [Internet]. Largest U.S. immigrant groups over time, 1960-present. 2015.