#### **ORIGINAL ARTICLE**



# The Role of Resilience in Ethnic Minority Adolescent Navigation of Ecological Adversity

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#### **Abstract**

Adverse childhood experiences and health disparities profoundly affect the health of ethnic minority adolescents and influence their overall well-being. In light of current health disparities and civil unrest, this secondary analysis sought to better understand resilience among ethnic minority adolescents living in rural eastern North Carolina (NC). Using Ungar's (2013) Theory of Resilience and Seven Tensions, the two tensions that depicted the most adversity for these adolescents were social justice and power and control. Racism and discrimination were identified as prevalent risk factors. Four tensions in the model, cultural adherence, identity, cohesion, and access to material resources, were linked to protective factors and represented ethnocultural pride. Findings suggest that rural-dwelling African American and Latinx adolescents share concerns related to racial adversity but navigate their ecological experiences in unique ways.

**Keywords** Adverse childhood experiences · Ethnic minority · Racism · Resilience

## Introduction

The Healthy People 2020 Midcourse Status Report of Adolescent Health Objectives revealed that critical objectives show little change or are getting worse (National Center for Health Statistics 2016). The objectives for adolescent health not met were: access to primary care and reproductive services; depressive episodes and suicide; nutrition and weight status; and substance abuse (CDC 2017a). African American and Latinx adolescents have the least favorable (most adverse) rates for these objectives (CDC 2017a).

Despite efforts to decrease health disparities there is evidence of continued marginalization of ethnic minority

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University of Alabama Capstone College of Nursing, Box 870358, Tuscaloosa, AL 35487, USA populations (Centers for Disease Control and Prevention 2016; Centers for Disease Control and Prevention 2017a; Merrick and Guinn 2018). More specifically, mental health inequalities are especially prevalent among ethnic minority adolescents (Alegría et al. 2015). Mechanisms exacerbating negative mental health trajectories for ethnic minority adolescents are said to be related to vulnerable developmental time periods, social and environmental factors producing health disparities, family-level mechanisms, and neighborhood conditions (Alegría et al. 2015). Rural dwelling ethnic minority adolescents face additional socioeconomic and health challenges, such as higher rates of poverty and limited access to healthcare services and public health programs as compared to urban ethnic minority adolescents (Centers for Disease Control and Prevention 2017b). Furthermore, there is limited research exploring underlying ethnic minority health disparities in rural areas thus widening the rural-urban health disparity gap (James et al. 2017).

In order to promote improvements in ethnic minority health, the mechanisms exacerbating negative mental health trajectories, such as the role of adverse childhood experiences (ACEs) in adolescent development, must be considered. Intentional collaboration among leaders who advocate for adolescent health could go far toward achieving the new Healthy People 2030 goals (Centers for Disease Control and Prevention 2020a). Two new goals, eliminating health



disparities and achieving health equity for ethnic minority adolescents and their families, should direct leaders' interest to better understand how complex pathways of social adversity may be experienced by the human mind and body (Singer et al. 2017). The purpose of this study was to examine experiences of and exposures to adversity among ethnic minority rural-dwelling adolescents.

ACEs influence ethnic minority adolescent mental health and well-being. The recent policy statement by the American Academy of Pediatrics (Trent, Dooley, & Dougé 2019) addressing the impact of racism on the health of minority youth coincides with a growing body of literature addressing resilience and ACEs in the United States. Numerous investigators consider racism a social determinant of health capable of producing adverse pediatric health outcomes (Bailey et al. 2017; Heard-Garris, Cale, Camaj, Hamati, & Dominguez, 2018; Soleimanpour, Geierstanger, & Brindis 2017; Ungar & Theron, 2019; Williams, Lawrence, & Davis, 2019). Racism, in this study, follows the three-tiered framework of Jones (2000); institutionalized racism, differential access by race; personally mediated racism, differential assumptions and actions (discrimination) by race; and internalized racism, acceptance of negative messages by the stigmatized race.

Two seminal ACE studies have received considerable attention due to an awareness of how childhood adversity contributes to poor adult health outcomes. The first ACE study was conducted with 9508 adults in San Diego, California. Felitti et al. (1998) found "a strong dose relationship between the breadth of exposure to abuse or household dysfunction during childhood and multiple risk factors for several of the leading causes of deaths in adults" (p. 251). Critics noted limitations in the study: the sample was composed of welleducated, White women, and a narrowly defined measurement scale was used (McEwen and Gregerson 2019). The second major study, The Philadelphia ACE Project (2019), included a large diverse urban population and measured context-specific data related to neighborhood safety, bullying, witnessing violence, racism, and foster care (Public Health Management Corporation 2013). The researchers found that African Americans reported higher rates of witnessed violence, discrimination, and adverse neighborhood experiences, compared to White adolescents (Public Health Management Corporation 2013). The adult ACE survivor health implications were unclear, as were the cultural strengths and community resources used to manage these stressors.

Unlike the prior ACE studies conducted in California and Philadelphia, North Carolina has a unique geographic and historical context that is especially important when considering ACEs and socio-health inequities. Ethnic minority children living in poverty in NC are at higher risk for experiencing childhood adversity. When compared to national-level data, children in NC had higher ACE contributing factors, such as economic hardship (25.5%), racial discrimination (4.9%), home violence

(7.2%), parental mental illness (8.0%), incarceration (9.9%), and substance abuse (8.6%) (America's Health Rankings, 2019). The North Carolina Institute of Medicine (NCIOM) (2020) identified that 23.6% of NC children ages 0–17 years have experienced two or more ACEs. In NC, 31.2% of African American and 33.5% of Latinx children under age 18 live in poverty as compared to 20.2% of White children (NCDHHS 2019). Critical reflection on historical experiences of racialized trauma in southern regions of the United States like NC is needed when examining adverse childhood experiences and health inequities. According to Ungar (2008),

In the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of individuals to navigate their way to health-sustaining resources, including opportunities to experience feelings of wellbeing, and a condition of the individual's family, community and culture to provide these health resources and experiences in culturally meaningful ways. (p. 225)

The overarching query for this study was, in the face of adversity, why are some adolescents more resilient than others? Research questions for this project were, what adverse childhood events are expressed by ethnic minority adolescents living in rural eastern NC, and what ecological mediators of resilience are identified in this subpopulation? Analysis was guided by Ungar's (2013) Theory of Resilience and Seven Tensions—access to material resources, relationships, identity, power and control, social justice, cultural adherence, and cohesion.

Adopting an asset-based framework, the authors used Ungar's (2013) Theory of Resilience and Seven Tensions to identify protective and risk factors experienced by these adolescents. Ungar's (2011a) Resilience Theory uses the four principles of decentrality, complexity, atypicality, and cultural relativity to define resilience as a way to understand that "the environment is even more critical to child development than a child's individual traits" (p. 4). This theory considers the synergy between the burdens an environment places on childhood adaptation, the capacity of the environment to foster resiliency processes, and individual characteristics.

Ungar's (2011b) Seven Tensions were developed from an international pilot study of the Child and Youth Resilience Measure (CYRM-28) that included 1451 purposively selected high-risk youths ( $M_{\rm age}$  = 16) in 14 communities in 11 countries. This global research team identified seven homogenous aspects of resilience or tensions, reporting them as: access to materials, relationships, identity, power and control, cultural adherence, and cohesion. In other words, Ungar (2008) believes resilient adolescents will navigate tensions in unique ways depending on individual and social capacities as well as the quality of resources within their environments.



# **Methods**

# Design

The researchers conducted a qualitative descriptive study (Sandelowski 2000, 2010) using a dataset from a parent study that sought to understand rural eastern NC adolescent perceptions of health and social concerns related to risk reduction (AUTHORS). A qualitative descriptive design is a type of design that stays close to the data and addresses a concern of clinical relevance (Sandelowski 2000, 2010). Ethical consideration was given for the protection of participants by the parent study and the University Institutional Review Board (IRB) granted approval for this project.

# **Description of Parent Study**

The parent study used a community-based participatory research design with an interprofessional team of academic faculty from nursing, human development and family science, addictions studies, and business. Community partners were from three youth outreach organizations that served the four rural NC counties from which the sample was recruited. The members of this community-academic partnership engaged in power-sharing processes and participated in all phases of the research process, from design to dissemination of findings.

All four counties in the parent study were designated as Tier One counties, which are identified as the most economically distressed (NC Department of Commerce 2019). Four factors are used when determining annual tier rankingsaverage unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita (NC Department of Commerce 2019). The data set was comprised of five gender-mixed focus groups (N = 49) of African American (75.3%) and Latinx (22.4%) adolescents, ages 12 to 16 years ( $M_{age} = 13.8$ ); 63% were females ((Larson et al., 2020). Four of the focus groups were primarily composed of African American adolescents, and one focus group was entirely Latinx adolescents. The focus groups were facilitated by White female academicians and interview data were transcribed by White female research assistants trained in focus group methodology. This data set was chosen for this study with the intention to understand potential ACEs among ethnic minority adolescents in a rural context.

## **Data Management and Analysis**

Transcripts were read multiple times by three research team members to understand the essence of each focus group. The authors began with the classic analysis strategy (Krueger and Casey 2015) to facilitate case comparison followed by Key-Words-in-Context analysis to identify key adolescent expressions, patterns, emotionally supported responses, word

specificity and extensiveness (Bernard et al. 2017). Next, first cycle coding methods were employed followed by second cycle coding (Miles et al. 2020). Rigor in this study was enhanced through analyst triangulation to optimize the accuracy of interpretations and findings by routinely using descriptive, interpretive, and theoretical validity checks (Sandelowski and Barroso 2007), reflexivity by memoing and weekly research meetings, and development of an audit trail.

In Vivo coding was used to identify intra-group prominent quotes associated with the Seven Tensions. In Vivo codes were then assigned descriptive codes (Miles et al. 2020) based on protective or risk factors. A protective factor was viewed as an enhancing factor (+), and a risk factor was considered an impeding factor (-). For example, if an adolescent verbalized feeling depressed from bullying, that concept was considered a risk factor with the potential to impede resilience. In contrast, if an adolescent verbalized feelings of opportunity in relation to immigration to the United States, that was considered a (+) protective factor with the potential to enhance resilience. Next, a cross-case comparison further assessed levels of aggregation across the five focus groups transcripts. Thematic analysis (Miles et al. 2020) was used to organize data into a graphic illustration of salient protective and risk factors.

Simultaneous comparison of variable attributes was used to identify patterns between the African American focus groups and the Latinx focus group (Bernard et al. 2017). Variation in the configurations of pattern codes was noted between the African American group and the Latinx group. These pattern codes were examined in relation to theoretical constructs. For example, if an adolescent expressed consistent experiences of racism and discrimination, then theoretically, these social constructs could impede resilience. Continuous reflection on Ungar's (2008) theory was used during synthesis and organization of enhancing and impeding resilience factors.

Some constructs appeared to have both resilience-enhancing and impeding properties. The factor was considered strong if it occurred several times within and between the African American and Latinx groups, if it was associated with extensive texts, such as a long discussion duration, and if other adolescents added verbal support to the discussion factor. Sometimes there were data to support a factor as having both enhancing and impeding influences. Figure 1. represents a final graphic illustration of Ungar's (2013) Theory of Resilience and Seven Tensions, as experienced by ethnic minority adolescents in this study.

# **Results**

Using Ungar's (2013) Theory, the tensions that depicted the most adversity for these adolescents were social justice and power and control; racism and discrimination were identified as prevalent risk factors. The four tensions that were linked to



Fig. 1 Factors impeding and enhancing resilience among African American and Latinx adolescents



protective factors and represented ethnocultural pride were: cultural adherence, identity, cohesion, and access to material resources. Findings suggest that African American and Latinx adolescents in rural eastern NC share concerns related to racial adversity but navigate their ecological experiences in unique ways.

Thematic analyses allowed for an assessment of biopsychosocial, economic, and political characteristics of African American and Latinx adolescents living in rural eastern NC. The most prevalent ACEs described were racism, discrimination, bullying, and personal and family mental health concerns. Using an asset-based framework, the researchers identified major contextual and cultural causal factors that could impede or enhance adolescent resilience, which resulted in three thematic statements (Sandelowski and Leeman 2012): tensions impeding resilience, tensions enhancing resilience, and relationships with varying degrees of support.

# **Tensions Impeding Resilience**

Two tensions were found to impede resilience: social justice, and power and control. Racism, the antithesis of social justice, was depicted in this remark, "It's sad, 'cause with us being African American, people don't want to see us win so we gotta

go so hard just to succeed." One Latinx adolescent further expressed the experience of racism stating,

Just because we're different by our skin color or the languages doesn't make us any different from anybody else. It just makes me so mad. All of us as, like, a community have suffered from racism. Like it doesn't have to specifically be directed to you or verbally be directed to you, but it just, it's kind of – it's hurtful.

African American adolescents expressed more adverse feelings and behaviors related to historical, interpersonal, and structural experiences of racism and discrimination than the Latinx adolescents. African American intergenerational racism was identified by the sharing of more personal stories of family members who experienced racial profiling, police brutality, incarceration, and other forms of violent behavior. One African American adolescent remarked.

Like my uncle was with me and he got tattoos on his face and like he black and he's like nowhere near light, I went to a place with him one time and like he just basically-we was at an airport-got racial profiled totally, like they felt like uh he had something in his pants. They pulled him over to the side, got him late, can't catch a plane.



Perceived lack of power and control resulted in minority adolescent expressions of fear, anger, and mistrust. Additionally, issues related to power and control appeared to be related to social disparities, such as economic hardship. An African American adolescent stated, "It's [selling drugs] not going to help their momma because, you know, you may have the money, but you're going to jail for that." African American adolescents expressed desires to adhere to cultural norms but felt misunderstood and dismissed. An African American adolescent noted, "I personally feel like Colin Kaepernick is going to be another Dr. King and like they don't want to see him win. They don't want to put him on the football team. All this because he wants to be there for the Blacks." Another adolescent added,

Like I don't know why they get mad when like football players like kneel for the anthem because like they're not kneeling like protesting against like the troops. They're kneeling to like talk about like how like teens are getting killed and like black people are like treated bad in America. But they're not listening.

Minority adolescents shared experiences of racial adversity but navigated ecological experiences in unique ways. The African American adolescents shared more historical and current micro- and macro-level experiences of racial adversity, as compared to the Latinx adolescents. Despite experiencing some micro-level racial adversity, the Latinx adolescents spoke frequently about the educational and economic opportunities available to them and their families in the United States.

# **Tensions Enhancing Resilience**

All adolescents in this study were part of a youth outreach organization, either faith- or community-based. Interestingly, the four tensions found to enhance resilience were related to participation in these youth outreach groups: cultural adherence, identity, cohesion, and access to material resources. Both African American and Latinx adolescents expressed positive feelings, including healthy coping mechanisms, when talking about their friends and youth groups, as well as accessing their phones for music. Passionate and prideful expressions of ethnocultural heritage were interpreted as enhancing resilience. Latinx adolescents expressed resilience enhancing factors related to their family's immigration to the United States. The Latinx adolescents remained focused on educational, economic, and social opportunities stating, "America is seen as a first – as a place where people can come and, you know, grow with their family or get a job or just different opportunities." Latinx adolescents justified immigration to this country in this comment,

A lot of our parents or ancestors or relatives have come to this country not to steal or steal people's jobs. It's kind of more as, our countries, our parents' countries, aren't the same as this country. There isn't as much opportunity, opportunities as there is here and other countries.

Opportunities appeared to be resilience-enhancing when Latinx adolescents had access to [culturally relevant] material resources. One Latinx adolescent recognized their cultural youth group as:

A club that can help you pay for your career, or look for different scholarships, it can help you, write up your essay or it can help you look for different resources as in taking tests, as in if you're looking for colleges, or what colleges have Hispanic communities.

Thematic analysis also identified other resilienceenhancing factors such as, identity, and cohesion. Both African American and Latinx adolescents expressed feelings of well-being with social and self-recognition. Ethnic identification is noted as resilience enhancing as reflected in this quote by a Latinx adolescent:

To meet new people that are kind of like you, that are from your same ethnicity, and are going through the same things that you are going through, and it's good to be able to do that with other people and talk with other people that are basically like you.

Similarly, ethnic identification was portrayed as resilienceenhancing by an African American adolescent in this excerpt, "I'm being' what my mama is and like she's a strong person and she's a big person also, but she has self-love."

Positive self-images and healthy adolescent identities can enhance resilience and feelings of well-being. For example, a Latinx adolescent stated,

What makes [me] feel better, happy, is allowing myself to do activities, as in, like, home, better activities in school and getting recognized, that makes me feel better, it makes me proud of myself and you're playing a sport, that's just going to make it [high school] more stressful, but it's good stress because you get a lot of recognition.

## **Relationships with Varying Degrees of Support**

The final tension, relationship, was found to have both impeding and enhancing factors toward resilience. African American and Latinx adolescents expressed both internalization and externalization of adverse experiences, with some



adolescents having more relational support than others. In one instance, an African American maternal-adolescent relationship appeared to impede resilience:

My momma, she's actually using drugs, cuz' she wasn't on a good path... then when I left her house, I kept getting into drugs, and thank God I got out of it, but sometimes I think it's introduced through family.

Conversely, a different perspective by an African American adolescent was noted to enhance resilience reporting, "at one point I was suicidal, like I thought about hurtin' myself many times but then I started to talk to my mama and to my grandma, they told me ways to deal with it."

Resilience-enhancing relationships were also noted in the Latinx focus group, such as, "I like to help my mom cook, and sometimes when she gets, umm, home from work, like, I'll ask her how was her day and stuff like that, and we would always, like, talk and make dinner." Another Latinx adolescent reported, "I have a really have a tight bond with my mom, so she's like my best friend, so basically whenever I need advice, like, she'll help me, even though she probably didn't finish school, but, you know."

Parent gender was noted to impede resilience for some African American adolescents. One African American adolescent stated, "some people really don't care when you talk about their dad, 'cuz their dad don't take care of them." Another African American adolescent stated.

Now I tell my sister that like if you not used to seein' the person come around normal, don't go to the person. Even with her dad and stuff like because I don't trust him. I don't even trust like my uncles and stuff. So, if not my mama or my god moms I tell her like don't go.

A few Latinx adolescents spoke about their fathers but it was only in relation to how hard their fathers work. For example, one adolescent stated,

My dad, he works a lot, so, like, you know he gets tired, and I don't really see him that much, because from his, schedule, working schedule, so when we do get to see him, we go out and stuff, but I can tell, like, he's tired.

#### Discussion

This study foregrounded the voices of ethnic minority adolescents to better understand protective and risk factors that enhance and impede resilience. The results suggest a usefulness for Ungar's (2013) Theory of Resiliency and Seven Tensions in understanding resilience as a multidimensional construct

that is "negotiated between individuals and their communities with tendencies to display both homogeneity and heterogeneity across culturally diverse research settings" (Ungar 2008, p. 219). The geographical location of the focus groups used for this study reveals historical roots of racialized trauma as a potential variable influencing the intergenerational health of minority families living in rural eastern NC. The local community-academic partnerships in this study exemplified the trust, collaboration, and co-exploration needed to increase the efficacy of health promotion across diverse populations. The demonstration of key principles of community-based participatory research, such as building equitable partnerships, valuing adolescent capacity-building, and cultural humility (Israel et al. 2018) are the mechanisms that allowed these trusting relationships to flourish.

These findings may help to expand socio-ecological perspectives of cultural and contextual influences of resilience. Contextual and cultural similarities and differences appear to be the central core of the final model in Fig. 1, providing supportive links to resilience enhancing and impeding factors. Cultural and contextual perspectives can be further explored with community partners using participatory research designs, such as community-based participatory research. Community-academic partnerships built on trust and respect can be an efficient and effective way to promote community health. Compatible social networks can collectively pool human, social, and economic capital to dismantle systematic inequities and overcome barriers to change (Murdaugh et al. 2019a). Community empowerment and community collaboration are key for sustainable health promotion (Murdaugh et al. 2019a). Other communityacademic partnerships may benefit through racial equity training as a way to overcome systematic inequities. Coexploration of these targeted populations' cultural assets is needed in order to co-develop healing minority adolescent relationships, decrease toxic stress, and to promote minority inclusion and racial equity.

Macro-level risk factors related to social (in)justice and (lack of) power and control, such as racism, discrimination, feelings of distrust, along with micro-level concerns of relationships among family and friends, were noted to be repeatedly expressed concerns for both African American and Latinx adolescents. However, contextual ACEs varied in expression between the African American and Latinx groups. Differences were noted as to how African American and Latinx adolescents processed and responded to traumatic racial experiences. The Latinx group members in this study recognized adversity in their lives and discussed topics such as substance abuse and suicide, however, they did not express personal experiences with either topic. African American adolescents explicitly personalized their social and health concerns, including systematic inequalities, racism, and discrimination.



Conversely, African American and Latinx adolescents expressed both internalization and externalization of adverse experiences, with some adolescents having more relational support than others. Internalized reactions ranged from expressions of withdrawal from friends and family, feeling anxious and depressed, and suicidal ideation. Externalized reactions were expressed as violent reactions, such as fighting or bullying. These findings could be applied in school-based health centers where nurses and behavioral health specialists can address mental health concerns of African American and Latinx adolescents. Thus, mitigating common access to health and social services barriers such as lack of transportation, lack of insurance, and few adolescent health specialists in their communities (NCIOM 2018; Verschelden 2017). The intersection of racism, poverty, and mental health disparities requires further examination in order to comprehensively understand the impact of co-occurring epidemics, such as the current disproportionate incidence of COVID-19 among communities of color (CDC 2020b) and how they influence the mental health needs of racially diverse rural populations.

Racism and discrimination were experienced by both minority groups, however assumptions that all racial adversity is the same, contributes to the systematic conditions that holds this social problem in place (Kania et al. 2018). Identifying more protective factors, such as cultural assets, social cohesion, healthy adolescent identities, access to evidence-based resources, and the promotion of healing relationships, may be the keys to changing the socio-ecological and political systems that hold ACEs of racialized trauma in place. As communities seek to decrease the chronic stressors minority adolescents experience, they increase the potential for healthy adult outcomes.

The National Center for Chronic Disease Prevention and Health Promotion (2020) reports that "90% of the nation's \$3.5 trillion in annual health care expenditures are for people with chronic and mental health conditions" (para. 1). The findings from this study support the growing awareness of negative health effects of chronic stress on human biology. In addition to typical adolescent stressors, ethnic minority adolescents are forced to navigate and negotiate racism and discrimination. The American Academy of Pediatrics released a policy statement addressing the impact of racism on the health of minority youth (Trent, Dooley, & Dougé, 2019). This professional statement coincides with a growing body of literature addressing resilience and ACEs in the United States. Health professionals consider racism a social determinant of health capable of producing adverse pediatric health outcomes (Bailey et al. 2017; Heard-Garris, Cale, Camaj, Hamati, & Dominguez, 2018; Soleimanpour, Geierstanger, & Brindis, 2017; Ungar & Theron, 2019; Williams, Lawrence, & Davis, 2019). Yet, racism needs to be more intentionally addressed in nursing and medical school curricula. At the same time, numerous studies support the existence of relational and

cultural assets that serve as protective mechanisms for racially marginalized individuals (Anderson, Anyiwo, Gaylor-Harden, Jones, & McKenny, 2019; Trent et al., 2019; Vasquez-Tokos & Norton-Smith, 2016; Wang, Henry, Smith, Huguley, & Guo, 2020).

#### Limitations

Several limitations related to the sample and setting were noted. The sample size was small and from a rural region of the southeast United States. The sample did not consider sexual orientation or gender identity; thus, we do not know if these variables contributed to the findings. Secondary analysis limits theoretical exploration due to an inability to confirm findings with participants. In addition, the purpose of the parent study was to address adolescent use of technology for health information. The rigor of this secondary analysis could have been strengthened by collaborative analysis with an African American and/or Latinx community member. The study could also have benefitted from inclusion of another Latinx focus group and a larger proportion of white adolescents.

# **Conclusion**

Using Ungar's (2013) Theory of Resilience and Seven Tensions we identified protective and risk factors, as well as ACEs of ethnic minority adolescents living in rural eastern NC. These adolescents were acutely aware of the world around them, as were the leaders in their youth outreach organizations. The authors remain committed to building healthy resilient communities in rural eastern NC and see communityacademic partnerships as vital co-learning processes. Collective efforts to build healthy academic-community partnerships empower health promotion strategies and identify needed points of intervention. Understanding systematic vulnerabilities helps healthcare providers to empower community self-care by increasing capacity and motivation for health sustaining behaviors (Murdaugh et al. 2019b). Future research studies are needed to understand the complex relationships between co-occurring epidemics and the mental health needs of ethnically diverse rural-dwelling populations. Unique contextual and cultural pathways may help researchers, key community members, healthcare providers, school officials, law enforcement, and policy makers better understand what resources unique ethnic minority adolescents may need to positively adapt and navigate, despite pathologic conditions in their ecologies (Ungar 2013). Together, communityacademic partners can co-identify and co-mobilize community assets, as well advocate for systematic equality so every minority adolescent has access to culturally relevant tools to succeed.



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# **Compliance with Ethical Standards**

**Conflict of Interest** The authors declare that they have no conflicts of interest.

**Informed Consent** This manuscript is the result of a secondary data analysis of a parent study which states all their procedures in their study involving human participants were in accordance with the ethical standards of the East Carolina University Institutional Review Board. No participant identifying information from the parent study is included in this manuscript submission. This manuscript has only been submitted to the Journal of Child and Adolescent Trauma.

## References

- Alegría, M., Grief Green, J., McLaughlin, K. A., & Loder, S. (2015). Disparities in child and adolescent mental health and mental health services in the U.S. [online format]. Retrieved from http:// wtgrantfoundation.org/resource/disparities-in-child-and-adolescentmental-health-and-mental-health-services-in-the-u-s
- America's Health Rankings analysis of U.S. HHS, HRSA, Maternal and Child Health Bureau (MCHB), Child and Adolescent Health Measurement Initiative (CAHMI), National Survey of Children's Health Indicator Data Set, Data Resource Center for Child and Adolescent Health, United Health Foundation. (2020). Health of women and children. [Online format]. Retrieved from https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/ACEs/state/NC. Accessed 18 May 2020.
- Anderson, R. E., Jones, S., Anyiwo, N., McKenny, M., & Gaylord-Harden, N. (2019). What's race got to do with it? Racial socialization's contribution to black adolescent coping. *Journal of Research on Adolescence*, 29(4), 822–831. https://doi.org/10.1111/jora.12440.
- Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *Lancet*, 389(10077), 1453–1463. https://doi.org/10.1016/S0140-6736(17)30569-X.
- Bernard, H. R., Wutich, A., & Ryan, G. W. (2017). Analyzing qualitative data: Systematic approaches (2nd ed.). Thousand oaks: SAGE Publications. Inc.
- Centers for Disease Control and Prevention. (2016). Preventing multiple forms of violence: A strategic vision for connecting the dots. [Online report]. Retrieved from https://www.cdc.gov/violenceprevention/pdf/Strategic Vision.pdf. Accessed 5 April 2020.
- Centers for Disease Control and Prevention. (2017a). Adolescent health.

  [Online report]. Retrieved from https://www.cdc.gov/nchs/data/hpdata2020/HP2020MCR-B03-Overview.pdf. Accessed 5 April 2020
- Centers for Disease Control and Prevention. (2017b). About rural health. [Online report]. Retrieved from https://www.cdc.gov/ruralhealth/about.html. Accessed 5 April 2020.
- Centers for Disease Control and Prevention. (2018). Violence prevention: BRFSS ACE data. [Online report]. Retrieved from https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/ace-brfss. html. Accessed 5 April 2020.
- Centers for Disease Control and Prevention. (2020a). What is the healthy people 2030 framework? [Online report]. Retrieved from https://www.healthypeople.gov/2020/about-healthy-people/development-healthy-people-2030/framework. Accessed 5 April 2020.

- Centers for Disease Control and Prevention. (2020b). Disparities in incidence of COVID-19 among underrepresented racial/ethnic groups in counties identified as hotspots during June 5–18, 2020–22 states, February–June 2020. [Online report]. Retrieved from https://www.cdc.gov/mmwr/volumes/69/wr/mm6933e1.htm. Accessed 24 Sept 2020.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., ... Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. American Journal of Preventive Medicine, 14(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8.
- Heard-Garris, N. J., Cale, M., Camaj, L., Hamati, M. C., & Dominguez, T. P. (2018). Transmitting trauma: A systematic review of vicarious racism and child health. *Social Science & Medicine*, 199, 230–240. https://doi.org/10.1016/j.socscimed.2017.04.018.
- Israel, B. A., Schulz, A. J., Parker, E. A., Becker, A. B., Allen, A. J., Guzman, J. R., & Lichtenstein, R. (2018). Critical issues in developing and following CBPR principles. In N. Wallerstein, B. Duran, J. Oetzel, & M. Minkler (Eds.), Community-based participatory research for health: Advancing social and health equity (3rd ed., pp. 32–35). San Francisco: Jossey-Bass.
- James, C. V., Moonesinghe, R., Wilson-Frederick, S. M., Penman-Aguilar, A., & Bouye, K. (2017). Racial/ethnic health disparities among rural adults-United States, 2012-2015. MMWR Surveillance Summaries, 66(23), 1–9. https://doi.org/10.15585/mmwr.ss6623a1.
- Jones, C. (2000). Levels of racism: A theoretic framework and a gardener's tale. American Journal of Public Health, 90(8), 1212– 1215. https://doi.org/10.2105/ajph.90.8.1212.
- Kania, J., Kramer, M., & Senge, P. (2018). The water of systems change. [online format]. Retrieved from https://www.fsg.org/publications/water\_of\_systems\_change
- Krueger, R. A., & Casey, M.A. (2015). Analyzing focus group data. In Focus groups: A practical guide for applied research (5th ed., pp. 151-155). Thousand oaks: SAGE publications, Inc.
- Larson, K. L., Ballard, S. M., Ellis, D. F., Peery, J., Cary, J., Levy, R., et al. (2020). A cultural approach to inform a mobile application for adolescent health. *Journal of Child and Family Studies*, 29(12), 3420–3432.
- McEwen, C. A., & Gregerson, S. F. (2019). A critical assessment of the adverse childhood experiences study at 20 years. *American Journal* of *Preventive Medicine*, 56(6), 790–794. https://doi.org/10.1016/j. amepre.2018.10.016.
- Merrick, M. T., & Guinn, A. S. (2018). Child abuse and neglect: Breaking the intergenerational. *American Journal of Public Health*, 108(9), 1117–1118. https://doi.org/10.2105/AJPH.2018.304636.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). Methods of exploring. In: *Qualitative data analysis: A methods sourcebook* (4th ed., pp. 125). Thousand Oaks: SAGE Publications, Inc.
- Murdaugh, C. L., Parsons, M. A., & Pender, N. J. (2019a). Community models to promote health. In *Health promotion in nursing practice* (8<sup>th</sup> ed., pp. 70–72). Pearson Education, Inc.
- Murdaugh, C. L., Parsons, M. A., & Pender, N. J. (2019b). Empowering for self-care to promote health. In *Health promotion in nursing* practice (8th ed., pp. 250–259). Pearson Education, Inc.
- National Center for Chronic Disease Prevention and Health Promotion. (2020). *Health and economic cost of chronic diseases* [Online report]. Retrieved from https://www.cdc.gov/chronicdisease/about/costs/index.htm. Accessed 20 Sept 2020.
- National Center for Health Statistics. (2016). Healthy people 2020, Chapter III: Overview of midcourse progress and health disparities. [Online format]. Retrieved from https://www.cdc.gov/nchs/data/hpdata2020/HP2020MCR-B03-Overview.pdf. Accessed 14 June 2020.



- North Carolina Department of Commerce. (2019). *County Distress Rankings (Tiers)*. [Online format]. Retrieved from https://www.nccommerce.com/grants-incentives/county-distress-rankings-tiers. Accessed 14 June 2020.
- North Carolina Department of Health and Human Services. (2019). North Carolina resident population health data by race and ethnicity. Retrieved from https://files.nc.gov/nccommerce/documents/files/2020-Tiers-memo\_asPublished\_120219.pdf; https://schs.dph.ncdhhs.gov/schs/pdf/NCPopHealthDatabyRaceEthOct2019v2.pdf. Accessed 23 Aug 2020.
- North Carolina Institute of Medicine. (2018, June). Recruitment and retention of the rural health workforce. [Issue brief]. Retrieved from https://nciom.org/wp-content/uploads/2018/06/Issue-brief\_FINALv2.pdf. Accessed 14 June 2020.
- North Carolina Institute of Medicine. (2020). *Health indicator 5: Adverse childhood experiences*. [Online report]. Retrieved from http://nciom.org/wp-content/uploads/2020/01/ACEs.pdf. Accessed 14 June 2020.
- Philadelphia ACE Project. (2019). *Philadelphia ACE survey*. Retrieved from https://www.philadelphiaaces.org/philadelphia-ace-survey
- Public Health Management Corporation. (2013). Findings from the Philadelphia urban ACE survey. [Online report]. Retrieved from https://drive.google.com/file/d/0B7fcUpFl415pdGVURFFjTUFTclU/view
- Sandelowski, M. (2000). Whatever happened to qualitative description? Research in Nursing & Health, 23(4), 334–340. https://doi.org/10. 1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G.
- Sandelowski, M. (2010). What's in a name? Qualitative description revisited. Research in Nursing & Health, 33(1), 77. https://doi.org/ 10.1002/nur.20362.
- Sandelowski, M., & Barroso, J. (2007). Optimizing validity of qualitative research synthesis studies. In *Handbook for synthesizing qualitative* research, (pp. 230–231). New York: Springer Publishing Company, Inc.
- Sandelowski, M., & Leeman, J. (2012). Writing usable qualitative health research findings. *Qualitative Health Research*, 22(10), 1404–1413. https://doi.org/10.1177/1049732312450368.
- Singer, M., Bulled, N., Ostrach, B., & Mendenhall, E. (2017). Syndemics and the biosocial conception of health. *The Lancet*, 389, 941–950. https://doi.org/10.1016/S0140-6736(17)30003-X.
- Soleimanpour, S., Geierstanger, S., & Brindis, C. D. (2017). Adverse childhood experiences and resilience: Addressing the unique needs of adolescents. *Academic Pediatrics*, 17(7), S108–S114. https://doi. org/10.1016/j.acap.2017.01.008.

- Trent, M., Dooley, D. G., Dougé, J., Section on Adolescent Health, Council on Community Pediatrics, & Committee on Adolescence. (2019). The impact of racism on child and adolescent health. *Pediatrics (Evanston)*, 144(2), e20191765. https://doi.org/10.1542/peds.2019-1765.
- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work*, 38(2), 218–235. https://doi.org/10.1093/bjsw/bcl343.
- Ungar, M. (2011a). The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct. *American Journal of Orthopsychiatry*, 81(1), 1–17. https://doi.org/10.1111/j.1939-0025.2010.01067.x.
- Ungar, M. (2011b). Assessing resilience across cultures using mixed methods: Construction of the child and youth resilience measure. *Journal of Mixed Methods Research*, 5(2), 126–149. https://doi. org/10.1177/1558689811400607.
- Ungar, M. (2013). Resilience, trauma, context, and culture. *Trauma, Violence & Abuse, 14*(3), 255–266. https://doi.org/10.1177/1524838013487805.
- Ungar, M., & Theron, L. (2019). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet. Psychiatry*, 7(5), 441–448. https://doi.org/10.1016/S2215-0366(19)30434-1.
- Vasquez-Tokos, J., & Norton-Smith, K. (2016). Talking back to controlling images: Latinos' changing responses to racism over the life course. *Ethnic and Racial Studies*, 40(6), 912–930. https://doi.org/ 10.1080/01419870.2016.1201583.
- Verschelden, C. (2017). Bandwidth recovery: Helping students reclaim cognitive resources lost to poverty, racism, and social marginalization. Sterling, VA: Stylus Publishing LLC.
- Wang, M., Henry, D. A., Smith, L. V., Huguley, J. P., & Guo, J. (2020). Parental ethnic-racial socialization practices and children of color's psychosocial and behavioral adjustment: A systematic review and meta-analysis. *The American Psychologist*, 75(1), 1–22. https://doi. org/10.1037/amp0000464.
- Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annual review of public health*, 40, 105–125. https://doi.org/10.1146/annurev-publhealth-040218-043750.

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