

# Sociocultural factors, resilience, and coping: Support for a culturally sensitive measure of resilience <sup>☆</sup>

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## Abstract

This investigation presents 1) a literature review concerning how adversity and resilience influence the development of youth from diverse cultural backgrounds; 2) an examination of measures of resilience with regard to cultural factors that relate to the nature of coping and resilience among young adults from diverse racial/ethnic backgrounds; and 3) the exploration of aspects of cultural resilience: childhood stressors, global coping, adaptive coping, maladaptive coping, and sociocultural support. Results for 305 college age women indicated that cultural factors were related to measures of these five aspects of resilience. Childhood stressors were experienced differentially by individuals from different racial/ethnic and social class status backgrounds, supporting proposals that ecological aspects, notably cultural background and experiences, influence the development of resilience. A conceptual framework illustrating how culture contributes to resilience and coping is presented. Implications for the development of a measure of *cultural* resilience and its usefulness for developmental community interventions are discussed.

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## 1. Introduction

Resilience has been defined as a “process, capacity or outcome of successful adaptation despite challenges or threatening circumstances,” and “good outcomes despite high-risk status, sustained competence under threat and recovery from trauma” (Masten, Best, & Garmezy, 1990, p. 426). Resilience from this perspective is critical to the discussion of children’s and adolescents’ well-being because youth with this quality are more able to overcome adversity and difficult life circumstances — or even normal developmental challenges (Clauss-Ehlers & Lopez Levi, 2002). Also, individuals who are better able to cope and adjust to difficult life situations are likely to prevent future, more problematic behaviors. The developmental aspect of resilience encompasses the idea that youth have “good developmental outcomes despite high-risk status” (Werner, 1995, p. 81).

Empirical investigations have examined coping mechanisms, protective factors, assets, and individual strengths (Lopez et al., 2002). More recently, the resilience literature has considered larger, contextual factors that influence the development of resilience and coping among youth (Clauss-Ehlers, Yang, & Chen, 2006). Part of this contextual focus

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examines cultural influences involved in resilience and coping. Clauss-Ehlers (2004) presents the term cultural resilience as describing the degree to which the strengths of one's culture promote the development of coping. This type of resilience has a number of aspects including a developmental trajectory within a cultural matrix composed of norms, family structure, and peer relationships.

The purpose of this paper is to develop a conception of resilience that delineates how sociocultural aspects of support can promote positive coping among youth from diverse backgrounds who frequently confront adversities during childhood and adolescence. The aim is to explore how cultural constructs and processes can contribute to resilience, increasing successful outcomes of dealing with challenges that confront children and adolescents from a variety of backgrounds, with particular attention to the coping abilities of women from diverse ethnic and racial backgrounds. Finally, an initial exploration of the theoretical, empirical, and applied aspects of such a framework is presented through the examination of a new measure of coping based on the concept of cultural resilience in a sample of young women from diverse ethnic and racial backgrounds.

### *1.1. Incorporating culture into the concept of resilience*

A growing body of literature examines how cultural factors relate to and influence the development of coping and resilience in youth from diverse racial and ethnic backgrounds. Specifically, this literature considers the problems faced by young women and men from diverse cultural backgrounds in the United States (U.S.). Such studies often recommend how communities can foster resilient development for children and adolescents.

In one study, Cabrera and Padilla (2004) examined school success in two (1 male, 1 female) Latino youth in the U.S. as one important aspect of positive and resilient development. An interview protocol considered the role of immigration in the informants' development as well as the role of the mother and father. Adversities confronted by the students in this study included border-crossing experiences, negative consequences of Proposition 187, which restricted illegal immigrants of all benefits except emergency medical care, and of Proposition 227, which virtually eliminated all bilingual programs in California. Other stressors faced by these students included poverty, racism, sexism, a lack of support from peers, and alienation. Rather than focus on the level of poor school achievement among these Latino youth, which is the focus of much of this literature, Cabrera and Padilla focused on resilience-factors that were *positively* related to academic success. Despite these adversities, the investigators found a clear connection between culture and study achievement. That is, students relied on family support to maintain a connection with their values and culture while also accessing social networks from which they could learn about the "culture of college" (p. 168).

Thus, it was the combination of both valuing one's culture as well as learning about the culture of the new system that helped the students be successful. Cabrera and Padilla (2004) wrote: "Some readers might argue that Erandi and Juan [i.e., the study participants] were the fortunate ones and that their success is atypical. We take the position, however, that Erandi and Juan succeeded only because they managed to learn what the middle class take for granted, that is, there is class- and culture-bound knowledge that is necessary to succeed in higher education" (p. 168).

In another study with members of a different cultural group, Belgrave, Chase-Vaughn, Gray, Addison, and Cherry (2000) explored adversities experienced by 10–12 year old African American girls. Fifty-five girls were in an intervention group and 92 girls were in the comparison group. The challenges faced by the girls included having adult responsibilities (e.g., taking care of household chores), reaching puberty before girls from other racial/ethnic groups, being sexually active at an earlier age, and being less likely to use birth control. Belgrave et al. designed, implemented and assessed the effectiveness of a cultural- and gender-specific intervention program designed to increase resilience among these young girls. Participants were given access to new resources and relationships that promote successful child development. For the intervention group, key components included activities designed to increase feelings of self-worth, Africentric values, ethnic identity, and gender identity.

The emphasis on positive contributions of culture to promoting resilience were based on a theoretical framework focused on an Africentric worldview that values "spirituality; harmony; collective responsibility; oral tradition; sensitivity to emotional cues; authenticity; balance; concurrent time orientation to past, present, and future; and interpersonal/communal orientation" (Belgrave et al., 2000, p. 136). The rationale for this emphasis was centered on the idea that protective factors are more effective than general support as a way to moderate the effects of risk, strengthen resiliency, and enhance positive development among African American females during youth and adolescence.

The study revealed positive contributions of culture. Specifically, the intervention group had significantly higher scores on the Africentric Values Scale, Children's Racial Identity Scale, and the Physical Appearance subscale of the

Piers–Harris Self-Concept Scale after their participation. Belgrave et al. (2000) concluded that “positive feelings about the self, one’s culture, and one’s ethnic group promote resiliency and are linked to positive behaviors (e.g., better school performance) and decreases in risky behaviors (e.g., early sexual activity, drug use)” (p. 143).

Clauss-Ehlers et al. (2006) found that strong ethnic and gender identities were predictive of resilience in response to stress, implicating the potential importance of cultural resilience in coping for some populations. This study examined the relationship between stress and resilience among a diverse group of college women. The women reported stress in four areas: school abuse such as teasing and bullying by classmates; non-school abuse such as verbal, physical, or sexual abuse that could be tied to family, friends, and community contexts; the unavailability of a caregiver; and the experience of racism and sexism in multiple contexts of everyday experiences. Those young women who reported an androgynous gender identity, that is, a gender identity that incorporates both traditionally masculine and feminine traits, were more likely than their peers to show greater resilience when faced with any one of these stressors. It appears that aspects of an androgynous gender identity provided the women with a greater array of skills with which to negotiate adversities. In addition, women who were engaged in learning about their ethnic group’s history and traditions reported greater resilience than women less engaged in exploring their ethnic identities. Clauss-Ehlers et al. (2006) concluded that these findings are consistent with those of previous research that revealed how ties to homelands and neighborhoods act as buffers against exhaustion and despair for diverse families dealing with a variety of stressors.

Several theoretical papers address the role of culture and diversity as important aspects of resilience in developmental accounts of coping. For example, Clauss-Ehlers (2004) presented a theoretical model that posits that culture and the sociocultural context influence resilience. This culturally-focused resilient adaptation model is described as “a dynamic, interactive process in which the individual negotiates stress through a combination of character traits, cultural background, cultural values, and facilitating factors in the sociocultural environment” (p. 36). Consistent with this approach, García Coll et al. (1996) presented a theoretical model in which children’s socioeconomic status (SES), culture, race, ethnicity, and exposure to racism and discrimination represent the ecological contexts within which minority youth live and grow. Unlike prior conceptualizations that do not emphasize culture, ethnicity, and race as central aspects of development in minority children, this model included a focus on adaptive culture, family structure, and roles that lead to developmental competencies and adaptive functioning in minority children. Within this model, adaptive culture includes traditions and cultural legacies, economic and political histories, migration and acculturation, as well as current contextual demands. These aspects of the García Coll et al. (1996) developmental model converge with those of the Clauss-Ehlers (2004) resilience model in the emphasis on culture and the sociocultural context as influences on adaptive development.

These theoretical models and the findings from Cabrera and Padilla (2004), Belgrave et al. (2000), and Clauss-Ehlers et al. (2006) implicate cultural factors as potential positive influences on the nature of coping and resilience in students and young adults from diverse cultural backgrounds. They speak to the role of culture and reference group identities in the development of resilience among youth. Despite these works that highlight the importance of cultural factors in coping of children and young adults from diverse ethnic and racial backgrounds, existing measures of resilience seldom include attention to cultural influences on the efficacy of dealing with adversity. While the literature cited leads to the conclusion that resilience must include culture in a study of diverse populations, a review of measures of resilience indicates that the major measures currently in use do not attend to cultural resilience.

## *1.2. Current measures of resilience*

Although various resilience measures exist, many have not had widespread use nor have they been considered for specific populations (Connor & Davidson, 2003). For the purpose of the present paper, three measures of resilience were reviewed. These measures were selected to demonstrate the types of measures that do exist to assess resilience. This review provides psychometric information and in so doing, moves the discussion from conceptual definitions of resilience to consideration of how the resilience construct has been operationalized. Information about the ability (or inability) of these scales to explain resilience among youth of color is also explored.

### *1.2.1. The Hardiness Scale*

The Hardiness Scale (Kobasa, Maddi, & Kahn, 1982) was one of the initial scales that explored the concept of resilience. The concept of hardiness was introduced in the medical literature when Kobasa et al. (1982) found a

personality difference between individuals with high stress who were healthy in contrast to individuals with high stress who became ill. Kobasa et al. (1982) identified this personality difference as “hardiness”, which was formally defined as “the use of ego resources necessary to appraise, interpret, and respond to health stressors” (Pollock, 1989, p. 53). The Hardiness Scale has been widely used in medical systems although it is increasingly being considered as a health promotion measure. The Hardiness Scale has appeared in several versions, the 71 item unabridged version and newer versions that have as few as 12 items. Three scales measure the concept of hardiness: Control (e.g., “Trying my best at work makes a difference”), Commitment (e.g., “I often wake up eager to start on the day’s projects”), and Challenge (e.g., “Encountering new situations is an important priority in my life”). Individuals indicate the extent to which they agree or disagree with the item (e.g., 0 = Strongly disagree and 3 = Strongly agree). Higher total scores indicate greater hardiness while lower scores indicate less. The Hardiness Scale has been revised to produce versions that address health issues via the Health-Related Hardiness Scale (Pollock & Duffy, 1990) and academic issues as illustrated by the Revised Academic Hardiness Scale (Benishek, Feldman, Shipon, & Lopez, 2005).

The scale has been used primarily with specific adult populations (e.g., nurses, lawyers). One study applied the Hardiness Scale to adolescents by changing work-related items to the school environment (Morrisey & Hannah, 2001). An internal consistency estimate for the adolescent version was reported at .63. Concurrent validity with the Memorial University Scale of Happiness (MUNSH; Kozma & Stones, 1980) was .24 ( $p < .001$ ). A first-order principal components factor analysis demonstrated four factors (i.e., control, change, commitment to school, and commitment to self) that accounted for 48.7% of the total variance. A review of the literature indicated little consideration of potential contributions of gender, race, ethnicity, and socioeconomic status on resilience as measured by the Hardiness Scale. When hardiness studies do appear to incorporate race and ethnicity, such investigations tend to address health rather than mental health issues (Harris, 2004).

### 1.2.2. Dispositional Resilience Scale

Like the Hardiness Scale, the Dispositional Resilience Scale (DRS) (Bartone, Ursano, Wright, & Ingraham, 1989) is a 45-item measure that conceptualizes resilience according to overall hardiness and the dimensions of control, commitment, and challenge. The DRS has established construct validity and internal consistency reliability for the three subscales that ranges from .62–.82, with an overall Cronbach’s alpha = .85 (Bartone et al., 1989).

The DRS carries a 4-point range of responses (0 = Not at all true, 1 = A little true, 2 = Quite true, 3 = Completely true). Sample items are “Most of my life is spent doing things that are worthwhile,” “When I make plans, I’m certain I can make them work,” and “The ‘tried and true’ ways are always the best.” Higher scores reflect greater resilience.

While items were designed to tap skills that are thought to help individuals cope with adversity, inspection of the content of the subscales reveals that the DRS may not tap into different cultural approaches to resilience. For example, the control dimension, with its sense of individualism (e.g., “It bothers me when my daily routine gets interrupted”), may not fit with more collectivist cultures. While the notion of individualism and thus individual control is at the heart of U.S. culture, it may not represent the adaptive cultural values of racial/ethnic groups who are more familial - or group-oriented in coping with adversity. Skills that help individuals deal with adversity have often not been normed on populations that have to manage racism, sexism, traumatic immigration experiences, or negotiating systems as a first generation participant. Similarly, the challenge dimension often reflects items that signify change (e.g., “By working hard you can always achieve your goals”). Such general descriptions of resilience do not seem to apply to particular populations or to samples that differ from the norm in terms of ethnic or racial history, experiences, and cultural ethos. For instance, in some cultures resilience is viewed as the capacity to accept a situation rather than change it (Strong, 1984). Thus, the ability to cope, and how coping may even be defined, can be manifested quite differently in different cultural contexts. Moreover, understanding the limitations in ability to effect changes may constitute a more realistic appraisal if the individual is dealing with stressors such as racism and ethnic identity issues rather than other types of stressors. Realistic appraisal, in such instances, may be viewed as more adaptive than false or unrealistic optimism in meeting such challenges.

Finally, many DRS items require the individual to respond based on his or her work life (e.g., “Most working people are simply manipulated by their bosses” and “It’s usually impossible for me to change things at work”). Employment-related items don’t reflect the experience of youth who are not employed, who are in school, and communities with different types of non-work experiences that play a role in resilience. A review of the literature indicates that the DRS tends to be used with an adult population. Moreover, racial/ethnic and gender considerations are not necessarily given priority.



### 1.2.3. Connor-Davidson Resilience Scale

The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) is a 25-item measure also influenced by Kobasa's (1979) work with hardiness. Sample items are "I like challenges," "I can deal with whatever comes," "Even when things look hopeless, I don't give up," and "I tend to bounce back after illness or hardship." Participants respond using a five point scale (0 = Not true at all, 1 = Rarely true, 2 = Sometimes true, 3 = Often true, and 4 = True nearly all the time). Scores can range from 0 to 100 with higher scores indicating greater resilience. Connor and Davidson (2003) report Cronbach's alpha for the CD-RISC at .89. Test-retest reliability indicates an intraclass correlation coefficient of .87. Convergent validity was established with the Kobasa Hardiness Scale at .83.

The CD-RISC has been used primarily with patients who experience anxiety, depression, and posttraumatic stress reactions. Connor and Davidson (2003) describe the scale as "a brief self-rated assessment to help quantify resilience and as a clinical measure to assess treatment response" (p. 77). Demographic variables were not given much consideration, although gender comparisons were run. The authors determined mean scores for racial groups but these were dichotomized into White versus non-White participants, ignoring differences (and similarities) that can occur between (and among) diverse racial/ethnic groups. The CD-RISC was used with a diverse group of first- and second-generation college students that reported significant effects for time in a pre-post intervention study (Clauss-Ehlers & Wibrowski, 2007). The psychometric properties of the CD-RISC were also examined in a Chinese version of the scale (Yu & Zhang, 2007). Confirmatory factor analysis of the Chinese version of the CD-RISC yielded a 3-factor structure of resilience (Tenacity, Strength, and Optimism) that differed from the 5-factor structure (Personal Competence, High Standards, and Tenacity; Trust in One's Instincts, Tolerance of Negative Affect, and Strengthening Effects of Stress; Positive Acceptance of Change and Secure Relationships with Others; Control; and Spiritual Influences) found in the U.S. Consistent with the position that a measure of cultural resilience is needed, Yu and Zhang (2007) concluded that the Western concept of resilience can be helpful in an Eastern context but that the construct of resilience needs to be modified to reflect aspects of Chinese culture.

To date, existing instruments have not incorporated recent research on cultural factors that promote resilience. Given changing demographics (U.S. Department of Health and Human Services, 2001) in an increasingly multicultural society and interconnected world population, there is an urgent need for psychologists and researchers to have instruments available to assess and understand the role of culture in the development of resilience.

Thus, this study examined factors that promote resilience within a new measure of coping. The utility of this measure of cultural resilience was assessed in a sample of college female students who represented approximately 35 ethnicities and four racial/ethnic groups that identified themselves as African American, White American, Latina, and Asian/Asian American.

## 2. Method

### 2.1. Participants

Participants were 305 female college students (mean age = 19.65 years;  $SD = 2.35$ ) at a large northeastern state university. With regard to racial/ethnic background, 16.4% participants self-identified as Asian or Asian/American, 16.4% as African American, 49.2% as White, and 18% as Latina. Six participants described themselves as upper class (2%), 53 (17.4%) as upper-middle class, 165 (54.1%) as middle class, 61 (20%) as lower-middle class, and 20 (6.6%) as lower class. Almost half the participants (47.2%) indicated that their mothers were born outside the U.S. and 48.5% of participants reported that their fathers were born outside the U.S. Participants primarily consisted of single college-aged women (97%), one participant was married, and three women had participated in a commitment ceremony.

The decision to study only females was based on the finding that only a few studies have examined the experience of resilience among diverse young women (Vasquez & De Las Fuentes, 1999). One of these studies found that African American, White American, and Asian American girls experienced decreases in self-esteem as they transitioned from elementary to high school (American Association of University Women, 1992). Clauss-Ehlers et al. (2006) found that college women with an androgynous gender identity were significantly more likely to be resilient in the face of adversity than women with different gender identity classifications, such as feminine, masculine, or non-differentiated. The current study seeks to extend such research by focusing on the challenges young women have encountered from childhood to the present and how they have responded to them. A college sample is particularly relevant as college students will soon be making the transition from university to workforce life.

Participants were recruited through a posting that was placed on the Undergraduate Psychology Subject Pool website and a participation sign-up sheet on the Department of Educational Psychology bulletin board. Undergraduate participants received 2 credits towards their total research participation requirements for psychology coursework. While participants did not specifically indicate whether they were undergraduate or graduate students, 96.1% self-reported being between 17 and 22 years of age.

## 2.2. Procedure

Participants were treated in accordance with American Psychological Association (APA) guidelines. Volunteers were told that the study aimed to understand how people dealt with difficulties encountered in life. They were informed that they would be reporting on stressors they had experienced going back to their early childhood. All students who volunteered participated. Participants gave informed consent and then completed a questionnaire over a time period that lasted about 35–40 minutes. Students were debriefed after questionnaire completion. They were told that the research aimed to understand how culture and cultural values can promote resilience. Participants were also informed that they would be provided a referral to the university counseling center if reporting on adversities brought up any issues they wanted to discuss with a professional. None of the participants requested a referral. Approximately 20 data collection sessions were scheduled over the course of three semesters with an average of 10 students attending each session.

## 2.3. Measures

Two measures, the *Cultural Resilience Measure* and the *Connor-Davidson Resilience Scale* were administered for this study. In addition, a single item measure, *Insight timing*, was included. These measures and the scales that comprise them are summarized in Table 1, where the full names and acronyms are given to facilitate reading.

### 2.3.1. Cultural Resilience Measure (CRM)

The Cultural Resilience Measure (CRM) was developed to assess cultural factors related to resilience and coping among adolescents and young adults from diverse racial/ethnic backgrounds. The CRM is a questionnaire that developed out of research based on the Cultural Resilience Survey (CRS; Clauss-Ehlers et al., 2006), a booklet of 90 questions about the individual's lifestyle and career, family background, stressors, supports, and development. Participants' responses to both open- and close-ended CRS questions were used as the basis of the CRM, which consists of 90 items comprising five scales (global coping, adaptive coping, maladaptive coping, and sociocultural support) that focus on childhood stressors. These constructs reflect salient issues regarding cultural resilience that are not addressed in the aforementioned measures of resilience.

The CRM scales reflect the model of culturally-resilient adaptation (Clauss-Ehlers, 2004) that explicitly focuses on how the individual negotiates stress through a combination of individual characteristics as well as cultural background, cultural values, and factors in the sociocultural environment. Content of the childhood stressors scale, for instance, specifically presents racism and sexism as adversities that may be responsive to cultural resilience; similarly, sociocultural support includes items that ask how the participant's culture and cultural values helped her deal with struggle. Adaptive and maladaptive coping correspond with the individual trait aspect of the cultural resilient

Table 1

Mean (and *SD*) and Cronbach's alpha reliability estimates for CRM (Cultural Resilience Measure) subscale scores and CD-RISC (Connor-Davidson Resilience Scale) total scores

Scale	Label	# items	Mean	<i>SD</i>	$\alpha$
CRM (Cultural Resilience Measure)					
Childhood stressors	CS	9	2.75	1.84	.61
Global coping	GCP	3	1.89	0.86	.29
Adaptive coping	ACP	10	1.95	1.93	.65
Maladaptive coping	MCP	10	2.62	2.18	.72
Sociocultural support	SCS	5	2.38	1.56	.68
Connor-Davidson Resilience Scale	CD-RISC	25	72.79	12.92	.91
Insight timing	INT	1	4.30	.96	n/a

adaptation model, although these behavioral options may also be influenced by the environment. Each of the five scales comprising the CRM is described more fully in the following sections.

*2.3.1.1. Childhood stressors.* Childhood stress is conceptualized in the literature as stressful experiences that can encompass normal developmental transitions (e.g., toilet training), unexpected events (e.g., divorce), catastrophic events (e.g., terrorism), and high-risk circumstances such as poverty, neglect, and abuse (Bagdi & Pfister, 2006; Shonkoff & Phillips, 2000). Nine types of events were included as measures of childhood stressors that potentially have an impact on children's and adolescents' optimal levels of functioning and comfort. Participants indicate whether they have ever experienced racism, sexism, been hit by a classmate, bullied, teased, physically abused (this differs from being hit by a classmate as physical abuse goes beyond the classroom, additionally behavioral indicators can include extensive injuries, skeletal fractures, long-term health problems, among others), verbally abused (this differs from being teased in the sense that verbal abuse may be more ongoing and intense in its goal of decreasing the recipient's self-esteem, although this is not always necessarily the case), sexually abused, or had a caretaker who was psychologically unavailable (Clauss-Ehlers, 2006). Thus, the content of the CRM's Childhood Stressor scale represents the concept of childhood stressor in general conceptual terms as presented in the literature. This connection between the scale and the literature provides some evidence of the content validity of the measure.

Each of the nine items is listed and the participant circles "yes" (scored as 1) or "no" (scored as 0) for each item to indicate if he/she has/has not experienced the stressor. A total stress score is calculated by summing the responses across the nine items. Higher scores represent having experienced a greater number of types of stressful events.

*2.3.1.2. Global coping.* Three items that focus on sociocultural factors in coping comprise the global coping measure. The three questions include: "Did you cope with the stressor(s) you faced?" "When you had a setback, did you allow yourself to recover by taking time to recuperate?" and "Did you incorporate something larger than yourself (i.e., social cause, religious belief) to cope with the situation?" Participants responded "yes" (scored as 1) or "no" (scored as 0) to these three questions, yielding a total global coping score of 0–3, where higher scores indicate greater reliance on global coping skills.

*2.3.1.3. Adaptive coping.* This measure presents 10 personal characteristics (e.g., "resilient"; "connected"; "confident"; "competent"; "flexible") that represent positive ways of coping with a stressor. The participant was asked about characteristics that she drew upon during her time of struggle. The participant was asked to indicate whether she viewed herself as evidencing that characteristic and also whether others viewed her as evidencing that characteristic. Those respondents who reported that only others viewed them as having this characteristic (or that the characteristic was not applicable for them) received a score of 0 for that adapting coping characteristic. Respondents received a score of 1 for each particular characteristic only if they reported that they themselves *and* others perceived them as possessing that characteristic. Scores were summed across items, ranging from 0 to 10 with higher scores indicating greater adaptive descriptions about one's reaction to stress.

*2.3.1.4. Maladaptive coping.* Participants were presented with 10 characteristics indicative of maladaptive reactions experienced when faced with the adversity (e.g., "depressed"; "loner"; "anxious"; "insecure"; "selfish"). Scoring was identical to the *Adaptive coping* measure. Higher total scores on the maladaptive measure indicate a greater degree of maladaptive reactions to stress.

*2.3.1.5. Sociocultural support.* Five items comprised this measure and asked about the different environmental, social, and cultural supports participants encountered when dealing with the adversity they faced (e.g., "Did your cultural values help you overcome/deal with the adversity you faced?"). The content of the items was based on larger macro level sociocultural influences that helped the individual manage stressors. The respondent received a score of 1 for each of the five sociocultural support items if she reported that they were able to access support from this particular area. A score of 0 was assigned for each aspect of sociocultural support from which the respondent did not access support. The total sociocultural support score ranged from 0–5. Higher scores indicate sociocultural support was utilized from more areas.

### *2.3.2. Connor-Davidson Resilience Scale (CD-RISC)*

Sixty-two of the 305 participants in the current study completed the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) in addition to the CRM to investigate convergent validity of the measures of resilience. Of

these respondents, 31 were African American and 31 were Latina. The CD-RISC was selected to provide information concerning convergent validity because it is one of the few established resilience measures that has been used with some diverse samples, including a culturally diverse group of first- and second-generation college students (Clauss-Ehlers & Wibrowski, 2007) and a sample of Chinese adult residents of the Guangdong province and the city of Beijing (Yu & Zhang, 2007).

### 2.3.3. *Insight timing*

Finally, a single question was used to gather information about the developmental time that the participant gained insight about adversities encountered (e.g., “At what point in your development did you gain insight or understanding about the difficulty[ies] you faced?”). Participants indicated that they first developed such insight in elementary school, middle school, junior high school, high school, college/after college, or still had not yet fully understood the difficulty encountered. Scoring for the insight timing item was as follows: Elementary school years = 1, Middle school years = 2, Junior high school years = 3, High school years = 4, College/post high school = 5, Have not yet fully understood the difficulty encountered = 6. Total scores ranged from 1 to 6, with lower scores reflecting earlier insight time and higher scores reflecting later insight time or not yet having insight.

## 2.4. *Hypotheses*

The theoretical literature on resilience and coping, the literature addressing the relationship between cultural values and coping, and the analysis of desirable properties of a measure of cultural resilience led to three hypotheses concerning the *Cultural Resilience Measure* (CRM):

**Hypothesis 1.** The CRM was expected to predict some aspects of resilience that are assessed by an established and traditional resilience measure (CD-RISC). However, because traditional measures do not reflect cultural aspects of resilience, the correlations were expected to be moderate.

**Hypothesis 2.** The CRM was expected to exhibit differences across various racial/ethnic and socioeconomic groups, thus supporting the notion that resilience relates to the ecological context and not merely individual traits *per se*.

**Hypothesis 3.** Respondents who reported developing insight about their adversities earlier in life were expected to demonstrate greater resilience and coping in CRM scores than respondents who reported having insight about their difficulties later in life or not at all.

Confirmation of these hypotheses will provide substantial support for the construct of resilience as well as for the influence of cultural variables. The ultimate goal of this study was to provide information that contributes to a conceptual model of resilience that in turn leads to the development of a reliable, valid, and informative cultural resilience scale.

## 3. **Results and discussion**

Analyses are organized into five sections. First, information (e.g., reliability estimates and descriptive statistics) regarding each of the five hypothesized cultural resilience aspects, childhood stressors, global coping, adaptive coping, maladaptive coping, and sociocultural support, is reported. Next, correlations among the scores for each of these measures are presented to explore the interrelationships among variables presumed to represent cultural resilience. Third, findings from a hierarchical stepwise regression analysis are presented to determine the degree to which CRM scores explain the variance observed in responses to Connor and Davidson's (2003) CD-RISC, the traditional measure of resilience. This is followed by an exploratory factor analysis that identifies distinct sources of variation in the CRM. Finally, anticipated gender differences, racial/ethnic differences, and social class group differences among the studied variables are explored. Given the complexity of the goals of this study, each of the several analytic outcomes are discussed as findings are presented, followed by a general summary and conclusion section.

### 3.1. *Five aspects of cultural resilience*

Table 1 presents means, standard deviations, and Cronbach's alpha internal consistency estimates for each of the scores obtained from the CRM and for the total score of the CD-RISC. The estimates of internal consistency reliability were



acceptable for each of the CRM subscales, with the exception of the *Global coping* score. This measure was comprised of only 3 items, which might have reduced the reliability of scores for this construct of general factors in coping.

As the means presented in Table 1 show, participants' mean CRM scores revealed that during the course of their development this sample of young college women had experienced about three stressors out of the nine presented in the questionnaire. The scores for adaptive coping were quite low and variable, suggesting that participants had used only about two of the possible 10 positive coping strategies. These participants indicated a slightly higher reliance on different types of the 10 presented maladaptive coping strategies when confronted with a stressor. The highest possible score for use of sociocultural support in the CRM was five and the means suggest that these coping strategies were used relatively often.

Table 1 shows that this sample of women scored high on the CRM measure of general resilience (global coping), with a mean score of 1.89 (maximum = 3). Recall that the CD-RISC is a 25 item questionnaire that yields a score ranging from 1–100 for overall resilience. In the present sample the total resilience score of 72.79 on the 100 point CD-RISC scale was generally comparable to the CRM general resilience score.

In addition, Table 1 reports the average for insight timing for the overall sample. Each insight time variable (elementary; middle school; junior high school; high school; post high school/college; have not yet understood) was coded 1 (Yes), 2 (No), or 3 (Not applicable). Of the 279 participants who responded Yes/No to the insight timing item, 2.2% of the total sample indicated insight time in the elementary school years, 5.4% in middle school, 6.1% in junior high, 33.3% in high school, and 53% in college and/or after high school. A chi square test examining differences in insight timing revealed that differences in insight timing occurred with racial/ethnic background,  $\chi^2(12, N = 305) = 22.54, p = .032$ . Specifically, only 2.1% of Asian American students reported insight occurred in junior high, while 33.3% reported insight did occur during the high school years. A similar pattern occurred for African American (15.9% in junior high versus 36.4% in high school), White American (3.0% and 31.9% respectively) and Latina (9.6% to 34.6% respectively) women as they transitioned from junior high to high school. The next major increase in insight timing occurred between high school and college/post high school. For instance, 33.3% of Asian American women reported insight timing in high school whereas 58.3% reported insight occurred during college/post high school years. Similar increases were seen across other racial/ethnic groups with African American (36.4% to 40.9% respectively), White American (31.9% to 60% respectively), and Latina (34.6% to 40.4 respectively) women each reporting insight increasing in later versus earlier childhood and adolescent years.

These preliminary analyses have implications for the five measures of cultural resilience. First, they highlight the reality that women experience childhood stressors, and, on average, have survived about three stressors during the course of their lives by the college years. Second, the analyses show that individuals engage various behavioral options as they react to the stressful events they experience. Participants reported that they responded to stress with a range of coping strategies that included adaptive coping, maladaptive coping, general coping, and coping through accessing sociocultural supports (See Table 1). The use of various coping strategies corresponds with Lazarus's (1966) cognitive appraisal approach that contends people differ in their interpretation of stressful events. As a result of these differing interpretations, reactions and coping strategies are also likely to vary. Further, the findings reported in Table 1 suggest that each individual may respond to the stressor with a mixture of reactions (i.e., maladaptive and adaptive strategies) simultaneously. Finally, these analyses highlight that sociocultural support was a coping mechanism for participants in this study. Together these results support the importance of research on cultural resilience and the need for the development of a cultural resilience measure.

### 3.2. Relationships among CRM scales and the CD-RISC measure of resilience

Table 2 provides a correlation matrix that demonstrates the interrelationships among the CRM scores and how each CRM subscale relates to scores on the established CD-RISC measure. Observed correlations are presented below the diagonal, and disattenuated correlations, corrected for unreliability, are presented in bold font above the diagonal.

Based on the disattenuated correlations, CRM scores for sociocultural aspects of support (SCS) were associated with the total resilience score (CD-RISC) derived from the Connor-Davidson scale (Connor & Davidson, 2003) and with the CRM scores for global coping (GCP), and for adaptive coping (ACP). In addition, the childhood stressors (CS) scores were correlated with maladaptive coping (MCP) scores in the positive direction. Global coping (GCP) was positively correlated with the CD-RISC measure of total resilience and with the CRM adaptive coping and negatively correlated with the maladaptive coping measure. Maladaptive coping (MCP) was also correlated negatively with insight timing (INT).

Table 2  
Correlation matrix of study variables

Variable	CD-RISC	CS	SCS	GCP	MCP	ACP	INT
CD-RISC	–	<b>0.07</b>	<b>0.64</b>	<b>0.63</b>	<b>–0.51</b>	<b>0.46</b>	<b>–.44</b>
CS	0.03	–	<b>–0.35</b>	<b>–0.13</b>	<b>0.54</b>	<b>0.12</b>	<b>–.11</b>
SCS	0.40*	–0.15*	–	<b>0.47</b>	<b>–0.14</b>	<b>0.34</b>	<b>–.12</b>
GCP	0.42*	–0.06	0.32*	–	<b>–0.21</b>	<b>0.23</b>	<b>.01</b>
MCP	–0.33*	0.24*	–0.09	–0.15*	–	<b>–0.03</b>	<b>–.23</b>
ACP	0.34*	0.06	0.26*	0.19*	–0.02	–	<b>.17</b>
INT	–0.34*	–0.06	–0.10	0.01	–0.19*	0.16*	–

Note. Observed correlations are presented below the diagonal and disattenuated correlations are presented in bold font above the diagonal. CD-RISC = total score on CD-RISC measure; all other scores are for CRM subscales: CS = childhood stressors, SCS = sociocultural support, GCP = global coping, MCP = maladaptive coping, ACP = adaptive coping, INT = insight timing.

\* $p < .01$ .

As expected, adaptive coping (ACP) was positively correlated with sociocultural support (SCS) and global coping (GCP). However, there was not a significant relationship between adaptive coping (ACP) and the more traditional CD-RISC measure of resilience. Though not hypothesized, a surprising finding concerned the lack of (a significant negative) relationship between adaptive (ACP) and maladaptive coping (MCP). That is, an increase in the former did not lead to a decrease in the latter. Rather, they appeared to be orthogonal constructs. This implies that adaptive coping can co-occur with non-adaptive coping. That no relationship exists between these two measures suggests that an increase in adaptive coping does not necessarily mean the individual will experience a decrease in maladaptive coping. It is possible that adaptive and maladaptive coping can co-exist without having any influence on one another. Perhaps the co-existence of these seemingly very different, even contradictory, strategies suggests that individuals have reactions that consist of both adaptive and maladaptive responses. Thus, when confronted with adversity, perhaps the challenge is to draw on support in the surrounding environment to encourage the individual to draw from his or her ability to adaptively respond to stress in the environment. Other than this unexpected pattern, the findings from the correlational evidence among measures are in the direction predicted by the first hypothesis.

### 3.3. The CRM as a measure of cultural resilience

Factor analysis was applied to the scores of each of the five CRM subscales to explore relationships among these possible components of cultural resilience. Using the method of principal axis, three factors with eigenvalues greater than 1.0 (1.64, 1.23, 1.06) were extracted and transformed to an oblique solution using an oblimin with Kaiser normalization rotation. The pattern matrix of factor loadings is presented in Table 3.

These three factors statistically summarize relationships among risk and resilience influences reported by the students about their developmental histories. Factor 1, with high loadings for sociocultural support (SCS), global coping (GCP), and adaptive coping (ACP) represents the *sociocultural aspect of coping*. Factor 2 corresponds to

Table 3  
Summary of factor analysis of study variables

CRM variable	Factor loadings		
	Sociocultural	Stress	Confluence
CS	–.06	.42	–.13
SCS	.70	–.03	.05
GCP	.46	–.08	.04
ACP	.38	.15	–.25
MCP	–.08	.63	.26
INT	.003	.05	.57

Note. CS = childhood stressors, SCS = sociocultural support, GCP = global coping, ACP = adaptive coping, MCP = maladaptive coping, INT = insight timing.

negative experiences encountered, with childhood stressors (CS), and maladaptive coping (MCP) as defining features. Factor 3 suggests a possible *confluence of sociocultural support, maladaptive coping, and insight timing*.

Taken together, these three factors suggest a conceptual model of how stress may promote adaptive or maladaptive coping. Fig. 1 presents a conceptual developmental model in which the child exposed to stress may respond with adaptive and global coping reactions or maladaptive coping. The model further posits that effective coping reactions lead to insight at an earlier time in life. The advantage of earlier insight timing is that with insight comes greater understanding; thus the child may be less likely to internalize the negative effects of stressors due to insights about the problem. The disadvantage is that the child may have insight but no environmental resources to validate, nurture, and support that understanding (such as the type of support conceptualized by the sociocultural support scale). This may lead to feelings of isolation, self-doubt, or even estrangement from other children if the child has a more mature perspective than her peers. Without sociocultural support, the child may respond to the stressor with maladaptive coping strategies. Maladaptive coping may eventually lead to insight but insight is likely to occur developmentally in comparison to those who engage adaptive strategies.

Fig. 1 presents one component of a coping model that focuses specifically on the role of cultural resilience. As shown in the left portion of the figure, childhood stress can lead to a possible range of coping that varies from adaptive (i.e., to engage adaptive, healthy strategies to work on the stressor) to maladaptive (i.e., to respond or deal with the stressor in ways that are not healthy) responses. Bagdi and Pfister (2006) assert that “the process through which a person manages the demands of a stressful person–environment relationship and the emotions generated as a result of this relationship is termed coping” (pp. 23–24). However, the lower portion of Fig. 1 illustrates that coping is not simply influenced by *social* support but also by *sociocultural* support that is comprised of adaptive culture with traditions and cultural legacies, economic and political histories, migration and acculturation, as well as current contextual demands. These aspects of the García Coll et al. (1996) developmental model converge with those of the Clauss-Ehlers (2004) resilience model in their emphasis on culture and the sociocultural context as influences on adaptive development. Thus, sociocultural supports include cultural legacies and as such can influence adaptive development because the coping strategies gain significance in part from the cultural milieu in which the individual learns about stressors, how to react, what is harmful, and how to state their goals.

Adaptive coping leads to insight at a young age and is critical to the definition of resilience as children with greater understanding of their stressor will be more privy to potential solutions from that awareness (processes indicated in the middle to right portions of Fig. 1). Adaptive coping can lead to insight at a young age because as the child engages adaptive behaviors, it is likely that positive changes will be experienced and perhaps some relief from the stressor will occur. As she engages the world in this adaptive way, the child can see that the world out there is very different from the world she knows as the context for the stressor. For instance, adaptive coping may afford a child a close friendship with a family. From this experience the child may see that not all families are verbally abusive to one another in the way that hers may be. This provides a benchmark for that child—allowing her to see that there are different ways people can relate to one another. Developing insight about this situation can, in turn, help her seek out similar kinds of positive situations. Timing of insight is critical to development, particularly in the younger years, as success and competence builds upon success and competence. In the above example, for instance, seeing that other families communicate well with one another helps the individual not internalize her home experience as necessary—she can expand upon the

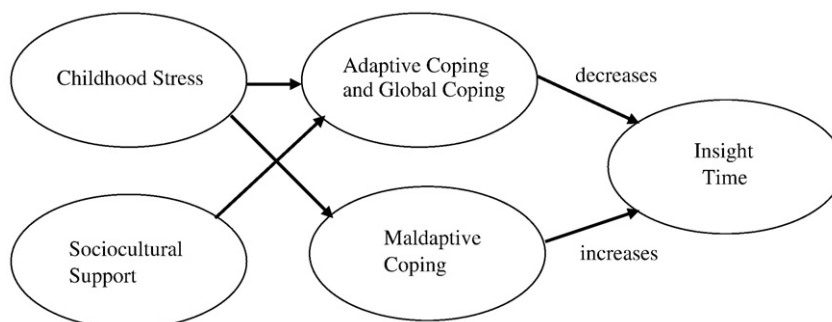


Fig. 1. Conceptual model of childhood stress and sociocultural factors.

positive family experience she has befriended and in so doing, be in a position to meet other people and experience more positive environments as well. Should insight come much later or not at all in development, the individual loses the opportunity to build upon successes, increases the potential for risk, and may experience a lack of positive momentum.

### 3.4. Regression analysis predicting CD-RISC scores from the CRM measures

A stepwise multiple regression analysis was conducted to determine whether CRM subscales were significant predictors of traditional conceptions of resilience as measured by the CD-RISC. This analysis was conducted to establish discriminant validity for the CRM. All the CRM scales were entered as predictors of the total CD-RISC scores. The results of this analysis are summarized in Table 4. As Table 4 shows, the CRM scores for global coping, for maladaptive coping, and for adaptive coping (accounting for 31% of the variance) were significant predictors of resilience as defined and presented by the CD-RISC. Scores for childhood stressors and sociocultural support did not predict CD-RISC resilience scores. These findings suggest that the CRM captures certain aspects of resilience, such as coping behaviors, that are assessed by the CD-RISC, a well-established reliable and valid measure of resilience. The results of the analysis are consistent with the first hypothesis, that the CRM measures would be predictive, at a moderate level, of resilience as measured by established traditional measures that do not include a focus on cultural aspects of resilience.

However, sociocultural factors, such as family and religion, which are not captured in more traditional measures of resilience, were not found to be predictive of the CD-RISC. The CD-RISC does not purport to assess cultural aspects of resilience. The finding that the CRM Sociocultural Support Scale (SCS) did not predict cultural resilience as assessed by the CD-RISC suggests that sociocultural issues are not being tapped by the CD-RISC. This pattern suggests that the CRM captures something sensitive to cultural resilience that is not assessed by less culturally sensitive measures. This suggests an independent positive outcome where we learn that for some, the development of resilience is facilitated by larger ecological factors like culture and cultural values.

### 3.5. Race/ethnicity and socioeconomic status differences in each aspect of resilience

A two-way (Race/Ethnicity  $\times$  SES) multivariate analysis of variance (MANOVA) was conducted with the five CRM scores an insight timing (CS, SCS, GCP, MCP, ACP, and INT) as dependent variables. The multivariate effect (using Pillai's trace criterion) for Race/Ethnicity and the interaction effect were not significant,  $F(18, 774) = 1.24, p = .22$  and  $F(60, 1566) = 1.242, p = .19$ , respectively. However, there was a significant multivariate effect for SES,  $F(24, 1036) = 2.49, p < .001$ .

Seven one-way ANOVAs were conducted to determine whether there were differences for the CD-RISC score and the six CRM subscale scores for the five socioeconomic status configurations (upper, upper-middle, middle, lower-middle, lower). The mean (*SD*) scores for each socioeconomic group are presented in Table 5 for each measure. There were significant differences for socioeconomic groups for two subscales of the CRM: childhood stressors,  $F(4, 300) = 11.88, p < .001$ , and sociocultural support,  $F(4, 300) = 3.54, p = .008$ .

A one-way analysis of variance (ANOVA) comparing means for socioeconomic groups revealed some significant differences with a Bonferroni comparison at the .05 level. The analysis showed that lower and lower-middle class women reported greater overall childhood stress than their middle, upper-middle, and upper class counterparts. Additionally, lower-middle class women in the study reported greater School Abuse than women who self-identified as middle, upper-middle, and upper class while women who self-identified as being in the lower class reported significantly greater School Abuse than women who self-identified as being in the upper class. Non-School Abuse also demonstrated significant findings with women who self-identified as being in the lower class reporting significantly

Table 4

Summary of outcomes of a stepwise hierarchical regression analysis predicting CD-RISC resilience scores from the CRM subscales

Step		$\Delta R^2$	<i>p</i>	<i>df</i> model	<i>df</i> error	<i>F</i>
1	Global coping (GCP)	.175	.001	1	54	10.64
2	Maladaptive coping (MCP)	.070	.022	2	53	9.06
3	Adaptive coping (ACP)	.062	.027	3	52	8.58

Note. Final  $\beta$ s were GCP = .322; MCP = -.260; ACP = .253.

Table 5

Mean (and *SD*) scores on the CD-RISC and CRM subscales for socioeconomic status configuration: one-way analysis of variance summary for five class categories

Variable	Socioeconomic groups					Bonferroni comparisons ( $\alpha = .05$ )
	Upper (U)	Upper-middle (UM)	Middle (M)	Lower-middle (LM)	Lower (L)	
CD-RISC		3.28 (.27)	2.93 (.39)	2.85 (.53)	2.87 (.83)	n/a
CS	.09 (.08)	.25 (.19)	.28 (.18)	.39 (.21)	.49 (.23)	U, UM, M < LM, L
SA	.17 (.18)	.41 (.28)	.47 (.31)	.61 (.32)	.58 (.32)	U, UM, M < LM; U < L
NSA	.04 (.10)	.14 (.26)	.13 (.22)	.25 (.29)	.36 (.33)	UM < L; M < LM, L
ISM	.08 (.20)	.25 (.32)	.27 (.38)	.34 (.39)	.63 (.36)	U, UM, M, LM < L
SCS	.53 (.10)	.56 (.30)	.50 (.31)	.38 (.31)	.36 (.33)	LM < UM
GCP	.78 (.27)	.60 (.27)	.19 (.27)	.17 (.30)	.23 (.36)	
MCP	.17 (.15)	.28 (.21)	.25 (.22)	.25 (.22)	.36 (.22)	
ACP	.30 (.32)	.21 (.18)	.19 (.19)	.17 (.17)	.23 (.24)	
INT	4.67 (.52)	4.48 (.78)	4.27 (.97)	4.26 (1.01)	4.0 (1.22)	
<i>n</i>	6	53	165	61	20	

Note. CD-RISC = resilience, CS = childhood stressors, SA = school abuse, NSA = non-school abuse, ISM = racism/sexism, SCS = sociocultural support, GCP = global coping, MCP = maladaptive coping, ACP = adaptive coping, INT = insight timing.

Too few participants were available for the Bonferroni procedure with CD-RISC.

more Non-School Abuse than those in the upper-middle class. Women who identified as lower and lower-middle class reported greater Non-School Abuse than middle class women. Women who self-identified as being in the lower class experienced more racism/sexism than any other SES group. Moreover, women who identified as lower-middle class experienced less sociocultural support than upper-middle class women. Table 5 presents a summary of these findings.

In sum, there were significant differences among the socioeconomic status groups in this study for Childhood Stressors and Sociocultural Support. The outcomes of these statistical comparisons support the second hypothesis that stated the CRM was expected to exhibit differences across various racial/ethnic and socioeconomic groups, thus supporting the notion that resilience relates to the ecological context and not merely individual traits *per se*. The CRM, for instance, demonstrated significant differences across socioeconomic groups of the women in this study. The third hypothesis, that respondents who reported developing insight about their adversities earlier in life were expected to demonstrate greater resilience and coping in CRM scores than respondents who reported having insight about their difficulties later in life or not at all, was not supported when socioeconomic status was considered as there were no significant differences for insight timing.

This analysis of childhood stressors indicates significant differences across all dimensions of this variable (i.e., overall childhood stress, school abuse, non-school abuse, and racism/sexism). The finding of significant differences in the experience of childhood stressors when socioeconomic variables are considered further suggests that overcoming adversity (i.e., resilience) needs to move beyond a mere focus on individual traits to incorporate the ecological context.

While respondents from lower and lower-middle class groups reported significantly more childhood stress among all its dimensions, they also reported significantly less sociocultural support. Rather, it was respondents from the upper, upper-middle, and middle classes who reported receiving the most sociocultural support. One way to understand these findings is to return to the discussion of the Cabrera and Padilla (2004) study. Recall that these authors concluded that the Latino participants in their study succeeded because they “managed to learn what the middle class take for granted, that is, that there is class- and culture-bound knowledge that is necessary to succeed in higher education” (p. 168). While Cabrera and Padilla (2004) focused on one aspect of developmental competence — academic achievement — the implication is that it is critical for young women from lower and lower-middle classes to have the necessary sociocultural support to confront the greater adversities they face. Perhaps there is less access to sociocultural support for these groups of young women as there may be less organization around these issues in ways that can provide a network of access. For instance, we don’t hear much about campus groups to support students with significantly fewer resources.

It should be recognized that Race/Ethnicity and Socioeconomic Status are highly confounded with one another,  $\chi^2(12, N = 350) = 66.51, p < .001$ . This finding has implications for program interventions and future research. However, findings of the current study do not address the relative importance of these two factors in designing intervention programs. Future research is needed to understand the roles of these factors more completely.



#### 4. General discussion

This study set out to examine the limitations of existing measures of resilience and propose a measure of cultural resilience. Such a measure could be used to explore how adversity and resilience influence the development of youth from diverse cultural backgrounds. Previous research has tested the psychometric properties of different instruments designed to measure resilience yet none of these measures has incorporated culture. Moreover, sample populations that much of these measures have been tested on consist of predominantly White youth with the experience of youth of color being omitted from consideration (Clauss-Ehlers et al., 2006; Lopez et al., 2002). The current study sought to fill this gap in the research on resilience measures by reviewing the literature on how cultural factors relate to and influence the nature of coping and resilience in college age students and young adults from various cultural groups.

In sum, many of the current findings support the contention that culture and diversity promote and influence resilience (Clauss-Ehlers et al., 2006). The CRM measure can help explore how resilience develops in people from various diverse cultural backgrounds. By studying the stressors individuals experience in the context of environmental supports, culture, cultural values, critical adults, larger contextual supports, and individual personal reactions, clinicians and researchers can come one step closer to understanding the particular risks and protective factors different people bring to the situations they face. With this understanding, they can seek to draw on resources from these areas, thus promoting resilience in the process. That adaptive and maladaptive coping can simultaneously co-exist further suggests that the larger sociocultural environment can draw on either one of these two potential reactions to stress.

These conclusions suggest several ways to increase resilience based on the information gained from the measure. We can begin to have an overall assessment of the stressors experienced by the individual and how these may in turn influence development. Additionally, the questions presented by the CRM encourage the researcher, clinician, and policymaker to consider drawing on resources from resilience areas in the individual's life. If cultural values help an individual deal with racism, for instance, and the individual is from a predominantly collectivist culture, connecting him or her with a peer group or extended family may be helpful. Certainly this was suggested in the case presented by Cabrera and Padilla (2004) wherein students reported greater academic resilience when they were connected with the resources that helped them learn about the culture of college.

Another way that we can increase resilience based on the findings of this study is to consider how we can encourage early insight and understanding. The data suggest that early insight may relate to greater resilience as the young adult suddenly has a new understanding about her struggle. This may help her externalize a problem like a sexist comment, for instance, rather than internalize the statement as being true and something for which she is to blame.

This study has several strengths that highlight its contribution to applied developmental psychology. This work presents a measure that incorporates culture into resilience, a construct that has not been fully integrated with conceptualizations and measures of resilience. Cultural resilience in development can pertain to how culture is associated with "good developmental outcomes despite high-risk status, sustained competence under stress, and recovery from trauma" (Werner, 1995, p. 81). Findings indicate that examining cultural factors that promote resilience is critically important to our understanding of resilience processes. The fact that this study focused on culture across four diverse racial/ethnic groups of women supports the generalizability of these findings to diverse racial/ethnic college-aged women.

Several limitations must also be discussed when considering the present findings. First, because the study required that participants reflect back on their experiences, perceptions of past events may have been subject to distortions of memory. Second, the research relied on self-reports of participant experiences as measured by the CRM. While responses of a subsample of Latina and African American women were compared with the CD-RISC, responses were not compared with other ethnic identity or gender identity measures. Future research would benefit from a corroboration of participant responses on the CRM with responses to scales that measure these other variables. Because there were no Native American students who participated in this study, there was no information available regarding resilience for this racial/ethnic group of women. Finally, although the measure achieved good intercorrelations among items, a strong factor structure and an adequate measure of reliability, the data should be interpreted with caution given the lack of ongoing established reliability and validity for this instrument.

The study suggests a number of possibilities for further research. The coping literature shows that while there are similarities between coping behaviors of White women and other groups there are also many differences (Lopez et al., 2002). As such, we need new models of stress and resilience that address the varied histories, strategies, and styles of diverse racial/ethnic groups. Based on the current study, a future next step is to collect new data on the five measures that make up the CRM. This data collection could focus on specifically administering the CRM with the appropriate

number of items for obtaining scale reliabilities of at least .8. For instance, a simple application of the Spearman-Brown formula indicates the following number of items would improve the scale: childhood stressors (23), global coping (29), adaptive coping (21), maladaptive coping (16), and sociocultural support (10). Clearly, more work is needed to refine the childhood stressors and global coping scales. For example, more information concerning the nature of childhood stressors may indicate that scale items should be differentiated to separately assess stressors of racism/sexism, abuse, and bullying; and global coping needs to be refined to fewer than 29 items to be practical. A research protocol for this purpose should also include a traditional measure of resilience to further ascertain CRM construct validity. Including an ethnic identity measure will further determine the CRM's reliability and construct validity. The sample for such a study must include youth from diverse socioeconomic and racial/ethnic backgrounds. Studies that validate the measure by having a sample of college-aged and high school youth will further capture developmental aspects of resilience.

Finally, there are many applied implications of this research, particularly as it pertains to the development of resilience across the lifespan. The conceptual model suggests that sociocultural aspects of support promote adaptive coping which in turn promotes insight earlier on in one's developmental history. This aspect of the model suggests that culture and cultural values can promote positive coping behavior among youth from diverse backgrounds who face an array of adversities. At the same time, having a stressful experience may lead to adaptive or maladaptive coping which then influences whether insight occurs earlier or later in one's development.

Practical applications of the model concern how researchers, clinicians, policy makers and others can look to cultural resources that promote adaptive coping and insight. Questions include: How does culture give this individual strength? What protective factors exist within the community? What sources of support is this child exposed to and how can they be increased? Comprehensive interventions that maximize protective factors and decrease stress are important to help children be less vulnerable (Werner, 1995). Findings also suggest that a cornerstone of these programs is to reach youth earlier rather than later in their lives. Early intervention may promote early insight which, as suggested by this study, is associated with the development of greater resilience. Perhaps early insight is related to resilience not only because it gives youth awareness about their current struggles, but also because these early realizations will help them grapple with, better understand, and be more apt to overcome the problems that have yet to present themselves in the future.

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