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ABSTRACT

The factor structure of the Coping Resources Inventory Scales for Educational Enhancement (CRISEE) was examined for its application to Hispanic, African American, and Non-Hispanic White middle school students. The study was designed to provide additional evidence for the validity of the CRISEE scales and to determine whether its psychometric properties held across diverse populations. The correlation between scales of the CRISEE and school-related performance, global self-esteem, and peer behavior were also examined. Students (n=1,724) who attended a southwestern urban middle school completed the survey. Findings indicated that the factor structures were similar across all three populations, and as expected, the CRISEE scales were strongly associated with the suggested outcome variables. (Contains 5 tables and 65 references.) (JDM)

RUNNING HEAD: Youth and Coping

Factor Structure of Coping Resources Inventory Scales for Educational Enhancement and its Relationship to School Outcomes Among Diverse Middle Schoolers

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Abstract

In this study we estimated and tested the factor structure of the Coping Resources Inventory Scales for Educational Enhancement (CRISEE) when applied to three subpopulations of Middle Schoolers: Hispanic, African American, and Non-Hispanic Whites. The CRISEE is an instrument designed to measure coping resources in youth. We also examined the correlations between scales of the CRISEE and school-related performance, global self-esteem, and peer behavior variables. The findings indicate that the factor structures are similar across all three populations and as expected the CRISEE scales are strongly associated with many of the aforementioned outcome variables.

Factor Structure of Coping Resources Inventory Scales for Educational Enhancement and its Relationship to School Outcomes Among Diverse Middle Schoolers

Given the social, economic, and political trends evident at the dawn of a new century, it is likely that children and adolescents will continue to face tremendous changes never imagined by their parents or grandparents as youths. Although it is impossible to predict exactly what changes these might be, the literature strongly suggests that adequate coping resources are a necessary prerequisite to successful adjustment in younger individuals (Cowan, Cowan, & Shulz, 1996). Coping resources play a central role in determining first, whether a demand will be experienced as a stressor, and second, how successful the individual will be in handling the stressor. As we have indicated, there is currently a paucity of empirically supported measures available for counselors seeking to help children and youth in coping with the strains of modern life (Mantzicopoulosm, 1990; Yamamoto & Byrnes, 1987), which seems essential for interventions, which recognize the differences in stress coping processes between youths and adults. The Coping Resources Inventory Scales for Educational Enhancement (CRISEE; Curlette, Matheny, Aycock, Pugh, Taylor, & Cannella, 1993) was developed to measure adolescent's perceptions of coping resources. McCarthy, Seraphine, Matheny, and Curlette (2000) conducted an exploratory factor analysis to evaluate the psychometric properties of the CRISEE, and found that the CRISEE scales seem to provide meaningful, distinct, and interpretable scores when administered to middle school students.

The present study was designed to provide additional evidence for the validity of the CRISEE scales. The focus is on the extent to which its psychometric properties hold across diverse populations: Hispanic, African Americans, and Non-Hispanic Whites. Two of

Mesick's' (1995) six aspects of construct validity are addressed in the study. The first aspect is structural, which refers to whether or not there is congruence between the factor structure of the item responses and the scales of the instrument across diverse populations. We use confirmatory factor analysis to assess the congruence of the factor structure and scales; the factor solutions are estimated separately for each population. The second aspect is external, which refers to the extent to which the scales are associated with variables that measure academic functioning and peer behaviors across diverse populations. Here, we use correlation coefficients to indicate the magnitude of the relationship between the CRISEE scales and the outcome variables.

Theoretical Background

One of the most insidious effects of stress, which is directly relevant to the work of counselors, is its affect on the ability of children and youths to function in the classroom. The percentage of high school dropouts among persons 16 to 24 years is approximately 11% (Geddes, 1998). Academic stress has been referred to as the "invisible disability" (Hill & Sarason, 1966) and has been estimated to interfere seriously with the academic performance of an alarming 6 to 10 million children a year (Barker, 1987). The stress response interferes with cognitive processing and, thus, inhibits learning and memory (Khalsa, 1997).

Of course, the difficulties of today's youngsters extend far beyond classroom performance. Children and youth are increasingly beset by sources of potential stress and alarming levels of risk behavior (Brabeck, Walsh, Kenny, & Comilang, 1997). In 1984, Green reported that adolescents comprised the only age group for which fatality rates were increasing and Basch and Kersch (1986) noted the rise in suicide, homicide, and unwanted pregnancy among adolescents over an entire generation. Benoit (1997) pointed out that 11% of teenage girls between the ages of 15 and 19 become pregnant each year.

Given the historical foundations of counseling in normal growth and development, it

seems important to recognize that children's well-being extends beyond their risk of developing psychological disorders after exposure to extreme environmental deprivation or hardship. Like adults, children can be vulnerable to excessive levels of stress in simply negotiating the demands of modern living (Cowan, et al., 1996). Early models of stress emphasized either the role of environmental stressors (Shinn, Rosario, Morch, & Chestnut, 1984) or the physiological adjustments required in confronting these stressors (Selye, 1976). However, over the past several decades increasing convergence has occurred among theorists and researchers towards a transactional model of stress (Cox, 1978; Lazarus & Folkman, 1984; Matheny, Aycock, Pugh, Curlette, & Cannella, 1986). These transactional models maintain that objective measures of potentially stressful events (e.g., change in employment status, loss of a loved one, academic demands) are weak predictors of stress symptoms because they discount personal reactions to these events. Accordingly, stress is hypothesized to result from an imbalance between appraised demands and appraised resources. Features of the demand (e.g., its intensity and the perceived consequences of failure to deal successfully with it) and of resources (e.g., their appropriateness and sufficiency) are taken into consideration in appraising the seriousness of the situation. According to this perspective, after the stress response begins, the individual then taps their reservoir of coping resources in an attempt to find strategies which can lessen the intensity of the response and which have the potential for altering the situation (for a more extended discussion of this theoretical framework, see Lazarus & Folkman, 1984 and Matheny et al., 1993 for a discussion of this framework with school-aged children and early adolescents).

The secret for healthy functioning then is to build adequate coping resources and to acknowledge possession of them. Confidence in one's coping resources creates a sense of control, and a sense of control may be the most effective buffer between potential stressors and stress symptoms (Antoni, 1987; Goleman, 1994; McCabe & Schneiderman, 1985; Sapolsky,

1994). As noted previously, children and early adolescents may experience less control over their worlds than adults. Their coping resources may be less well developed, and their homes, schools, and communities are often run by adults who underestimate the terrors of growing up. The key then is perception: the student's perception, not the perceptions of parents, teachers, or counselors.

Coping has recently been suggested as an organizing framework for understanding aspects of childhood and adolescent functioning including such domains as academic performance (Skinner & Wellborn, 1997) and emotion regulation (Glyshaw, Cohen, & Towbes, 1989; Saarni, 1997). Hobfoll (1988a; 1988b) maintained that the focus of stress models should be directed mainly to the resource side of the equation. He argued that the measurement of coping resources would be more predictive of stressful reactions than the measurement of external demands. Counselors intent on assisting children and adolescents in coping will profit from accurate measurements of their coping resources which can serve as a useful predictor of how well children can meet life demands. However, in spite of the obvious importance of perceived resources, few credible attempts to measure them have been made, either for adults (Matheny, Aycock, Curlette, & Junker, 1993) or for children (Mantzicopoulosm, 1990).

Early stress instruments, including those developed for children and adolescents (Coddington, 1972), were measures of the cumulative effects of life events (Dohrenwend & Dohrenwend, 1974; Holmes & Rahe, 1967; Monaghan, Robinson, & Dodge, 1979; Sarason, Johnson, & Siegel, 1978). Because such measurements ignored the respondent's subjective appraisals, correlations of life events with stress symptoms, such as illness, were quite modest - usually in the .2 to .3 range (Rabkin & Struening, 1976). While later efforts attempted to take the respondent's perception of major life events into consideration (Derogatis, 1987; Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978), all of these measures only attended to one-half of

the stress equation - namely, the measurement of perceived demands.

Other instruments, again mainly developed for adults, have focused on coping strategies, rather than coping resources (Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1988; McCrae, 1984; Schutz, 1962; Stone & Neale, 1984). Coping strategies are behaviors that occur after stressors have been engaged (Pearlin & Schooler, 1978). While the use of coping strategies can be an important component of adjustment, acquiring and developing sufficient levels of coping resources is important because of the perceptual nature of stress. Individuals who perceive themselves as having adequate levels of coping resources are less likely to become stressed in the first place because they will tend to view demands as healthy challenges rather than unpleasant stressors (Greenglass & Burke, 1991; Ogus, 1992). Once an individual has become stressed, coping resources also serve as the foundation for coping strategies used to lessen or negate the costs of dealing with demands (Wheaton, 1983).

While several instruments have been developed in recent years to measure adult perceptions of coping resources (for example, the Health and Daily Living Form (Moos, Cronkite, Billings, & Finney, 1985); the Coping Resources Inventory (Hammer and Marting, 1988); and the Coping Resources Inventory for Stress (CRIS; Matheny, Curlette, Aycock, Pugh, & Taylor, 1987), there is clearly a need to extend the work on assessing coping which has been conducted with adults to elementary and middle schoolers. The present purpose therefore is to examine whether there is evidence for the construct validity of a new instrument designed to measure the coping resources of elementary, middle, and high school students, the Coping Resources Inventory Scales for Educational Enhancement (CRISEE; Curlette, Matheny, Aycock, Pugh, Taylor, & Cannella, 1993). Past exploratory research conducted with the CRISEE has been conducted to narrow the item pool for the instrument and to determine whether its hypothesized scales have criterion-related validity (Arnold, 1992; Curlette et al., 1993), but

several limitations currently exist. These include a) previous research has only been conducted with middle class European American elementary and high school students in the Southeast, b) the construct validity of the 79 items which comprise the resource scales has not been tested with a large sample, and c) previous research conducted to narrow the item pool has not demonstrated whether the coping resources measured are best explained by five or six scales. In its current form, the CRISEE has five coping resource scales and an additional resource scale, labeled Responsibility, which was developed by the authors but has not yet received research support (Curlette et al., 1993). The instrument also has an external stressor scale and 2-item validity scale which bring the total number of items for the CRISEE to 99; these were not included in the factor analysis in this study since these items were not expected to form distinct constructs. Because this instrument has never been tested with a diverse sample of middle schoolers, the present study used exploratory factor analysis to assess the psychometric properties of the scales. The study was also designed to test whether scores on the scales differed across a number of demographic variables.

The racial and socioeconomic homogeneity used in developing the CRISEE to date seems particularly salient given that ethnic minority children are disproportionately exposed to stressful life conditions (Gonzales & Kim, 1997). Additionally, exploration of the construct validity of the CRISEE in grades six through eight also seems essential because of the adjustment difficulty often associated with the middle school years (de Anda, 1998; Elkind, 1986; Greene & Ollendick, 1993). Within the span of a few years, these students can find themselves in substantially different educational and social environments than they experienced in elementary school. Middle schools are usually larger, less nurturing, and far more ethnically diverse than the typical grade school. In addition, the middle school setting may present an environment fundamentally at odds with the students' developmental needs, a "mismatch" that for some

initiates a steady decline in their competence, motivation, and self-esteem (e.g., Eccles, Lord, & Midgley, 1991; Rosenberg, 1986; Simmons & Blyth, 1987).

The current study was designed to address some of the limitations in the development of the CRISEE by examining the factor structure of the instrument when administered to a relatively large sample of ethnically diverse sixth through eighth graders drawn from a school system in the Southwest whose students represent a range of socioeconomic levels. Because of the relatively large sample size, we were able to use methodology designed especially for dichotomous responses (all answers on the CRISEE are true/false) and were able to evaluate the extent to which the factor structure held for each of three subpopulations: Hispanics, African Americans, and Non-Hispanic Whites. In addition, we assessed the extent to which the subscales of the CRISEE are associated with school functioning, global self-esteem, and peer behaviors variables for each of the three subpopulations.

Methods

Participants

The participants were 1,724 students who attended one of three Southwestern urban middle schools. On the basis of self-reported ethnicity three separate sub-samples were created to represent three ethnic populations: Hispanic (N = 838), African Americans (N = 467), and Non-Hispanic White (N = 419). The sub-samples were similar in terms of sex, grade, level, and age. About one third of the students were in each of the three grades: sixth, seventh, and eighth. Of the Hispanic sample 31.3% were in the sixth grade, 36.9% were in the seventh grade, and 31.2% were in the eighth grade; of the African American sample, about 40.2% were in the sixth grade; 25.6% were in the seventh grade; and about 33.5% were in the eight grade; and finally, of the Non-Hispanic White sample, about 45.8% were in the sixth grade, 32.5% were in the seventh grade, and 21.5% were in the eighth grade. About 50% of each sample was female and 50% was

male. Of the Hispanics 48.4% were female and 50.7% were male; of the African Americans 53.4% were female and 45.9% were male; and of the Non-Hispanic Whites 45.8% were female and 53.7% were male. The total percentages for the samples are often less than 100% due to missing data. In the overall sample, participants ranged from 11 to 16 with a modal age of 13 ($M = 12.85$, $SD = 1.05$): the participants' mean age showed little variation across sub-samples: Hispanic ($M = 12.73$, $SD = 1.03$), African Americans ($M = 12.70$, $SD = 1.02$), and Non-Hispanic Whites ($M = 12.43$, $SD = 1.04$).

Middle school A is located in a predominantly European American, middle class neighborhood. According to the School Profile published by the school district, 51% of the total student body was designated low income and 61% of the students participating in this study reported that they qualified for free or reduced cost lunches. The majority of the low-income students are bused to school A from geographically distant and predominantly minority (African American and Latino/a) neighborhoods. Middle school B is located in a multi-ethnic, lower to middle-class, inner city neighborhood. Again according to the School Profile published by the school district, 71% of the students were designated low income and 63% of the students participating in this study reported that they qualified for free or reduced cost lunches. Middle school C is located in a predominantly Hispanic and African American economically disadvantaged neighborhood. According to the School Profile published by the school district, 67.6% of the total student body was designated low income and qualified for free or reduced cost lunches.

Procedure

As part of a school-wide survey, the data for this study were collected during one day in

each of the schools. The sample included all students whose parent or guardian did not refuse permission (passive consent), who did not themselves refuse to participate, and who were present on the day of the survey administration. Parental and child refusal rates were very low (less than 1% of the sample) and the percentage of students in attendance on the day of the administration was approximately 75% for each school.

During social studies classes, each student was given a questionnaire to fill out. If students did not wish to complete the questionnaire, they were instructed to leave it on their desk and turn it in blank at the end of the period. In this manner, no attention was drawn to students who did not want to complete the questionnaire. If the parents had stated that they did not wish the student to participate, the students were removed from the room before distributing the questionnaire. Confidentiality was assured to all participants. No members of the staff at the school had access to the data except in the form of frequencies data for the school.

Instrumentation

CRISEE. The 99-item CRISEE was used in the present study (Curlette et al., 1993). The developers constructed the original pool of items on the basis of an extensive review of the literature regarding stress and coping in children (Matheny, et al., 1993). Next, a factor analysis was conducted to identify the scales and reduce the number of items per scale by eliminating items that loaded on more than one factor (indicating the item was multidimensional) or that failed to load on any factor (Curlette, et al., 1993). On the basis of the content of the remaining items, six coping resource factors were identified: Social Confidence (SC), Behavior Control (BC), Peer Acceptance (PA), Academic Confidence (AC), Family Support (FS), and Responsibility (RS). Curlette et al. (1993) then assessed the internal consistency of each scale, by using Cronbach's alpha: .83 for SC; .83 for BC, .85 for PA; .83 for AC; and .82 for FS.

The sixth factor, Responsibility, had only seven items, which loaded with values of .30

and above. The RS items were excluded from the current analysis, because thus far the integrity and distinctiveness of the scale has not been supported by empirical studies (Curlette, et al., 1993). Moreover, the RS scale failed to emerge as a distinct factor in the exploratory factor analysis reported by McCarthy, Seraphine, Matheny, and Curlette (2000).

Previous research has offered support for the criterion-related validity of the CRISEE. Arnold (1992) studied the relationship between the coping resources of school children and their self-esteem, locus of control, and degree of anxiety experienced and found that the CRISEE scales were positively correlated with self-esteem and internal locus of control and negatively correlated with anxiety.

As noted above, the current version of the CRISEE is made up of 99 true/false items, which are totaled to yield scores for each of the six coping resources measured. Two of the items (items 62 and 65) are used to assess response validity and 18 items are designed to measure external stressors (see the appendix for paraphrased versions of these items), leaving 79 items to measure coping resources. Some items are reversed coded. Higher scores on the coping resource scales reflect higher levels of those attributes.

Only five of the six subscales are the focus of the current investigation, which means only 69 items were included in the analysis. The five coping resources scales are further described below.

Behavior Control (BC) (13 items). Students who score high on Behavior Control generally are cooperative and seldom create problems either in their schools or their communities. They seldom break rules, pick on other students, or get into fights. They usually handle their anger in a socially appropriate manner and usually maintain positive relationships with their teachers.

Peer Acceptance (PA) (14 items). High scorers on Peer Acceptance usually feel liked and

accepted by other children. They report that other children like them, treat them well, and like their appearance. They make friends easily and get along well with others.

Social Confidence (SC) (14 items). High scorers on this scale report that they freely disclose their feelings and opinions, are assertive in negotiating their needs, relate comfortably with peers, and behave independently of others when appropriate. Consequently, such students should move freely among other children and youth and actively seek opportunities to be with them. They are more apt to attend extra-curricular activities than students who are less socially confident.

Academic Confidence (AC) (15 items). Students scoring high on this scale report that they feel confident of their ability to do well in school, have good time management skills, and do quality work.

Family Support (FS) (13 items). Students who score high on this scale report that their families are supportive, accepting, and helpful. Such families help their children with homework and problem-solving, spend time with them, and listen to them. Such students generally feel happy and secure and have a sense of belonging at home.

Table 1 reports the internal consistency of each of the five coping resource scales (i.e., BC, PA, SC, AC, and FS) as applied to each of the three sub-samples: Hispanic, African American, and Non-Hispanic White. The Cronbach's alpha coefficients ranged from .6339 to .8559 and varied only slightly across the three samples. Only one coefficient was below the recommended cutoff of $\alpha = .70$ (Nunnally, 1970): for the African American's responses to the Family Support scale the $\alpha = .6339$.

Self Esteem. Self-esteem was measured by using the Rosenberg Self-Esteem Scale (Rosenberg, 1979) and is hereafter referred to as ESTEEM. The scale is a ten item measure of global self-esteem that originally was scored as a seven-point Guttman scale, but in the present

study was scored as a five point Likert-type scale, ranging from strongly agree (5) to strongly disagree (1). The responses to the scale have been shown to have good internal consistency with an alpha of .80 (Carlson & Lein, 1998).

Close Friends Peer Behaviors. Carlson, Uppal, and Prosser (in press) developed an instrument to assess peer relationships by asking respondents about the behaviors of their close friends. Respondents were asked to indicate how many of their close friends (None, Some, Many, or All) exhibit any of the behaviors on a list that are considered to be positive (e.g., "My close friends study hard and do their homework" or negative (e.g. , "My close friends skip school"). A factor analysis of these items yielded two factors: Self Enhancing Peer Behaviors (SEPB) and Self-Destructive Peer Behaviors (SDPB) (Carlson, et al., in press).

School-Related Performance. This domain of the survey included questions that were designed to assess academic performance and involvement in school. Students were asked to report on time spent on homework (none, less than 1 hour, 1-2 hours, more than 2 hours), usual grades (mostly As, mostly As and Bs, mostly Bs and Cs, mostly Cs and Ds, and mostly Fs), and school absences (none, 1-2 days, 3-4 days, 5-7 days, more than 10 days) hereafter referred to as HOMEWORK, GRADES, and ABSENT, respectively.

Analysis

Both a confirmatory factor analysis and a correlational analysis were performed. To conduct the first analysis LISREL 8.30 (Joreskog & Sorbom, 1999) was used to estimate and assess the fit of the proposed five-factor model, where each factor of the model corresponded to one of the five scales of the CRISEE, as shown in figure 1. The maximum likelihood estimation procedure was applied to each matrix of tetrachoric correlations associated with each of the three sub-samples created for the study: the Hispanic, African American, and Non-Hispanic White. Typically with dichotomous data the weighted least squares estimation procedure is used, but

because of small sample sizes, it was impossible to estimate the asymptotic covariance matrix required by the procedure. Hence, the maximum likelihood procedure was used. Separate analysis for each ethnic group was conducted for two reasons: 1) it allows one to determine whether or not the factor structure is invariant across groups; and 2) it provides a mechanism for model replication across three samples, particularly if the same factor structure holds across ethnic groups.

The reason the procedure was applied to tetrachoric correlation matrices is because the developers of CRISEE assumed that each true/false item response represents an underlying continuous distribution of that aspect of a coping resource. According to Nunnally (1970) the association between two dichotomously scored that are inherently continuous is best represented by tetrachoric correlation coefficients.

Results

The descriptive statistics of the CRISEE scales for each of the three sub-samples created for the analyses are shown in Table 2. The means and standard deviations of the variables included in the analyses are similar across all three sub-samples.

Several goodness-of-fit statistics were used to assess model fit: the chi-square fit statistic; the chi-square ratio (χ^2/df); and two goodness of fit statistics, NNFI (Tucker & Lewis, 1973) and CFI (Bentler, 1992), both recommended by Hu and Bentler (1995). A statistically significant chi-square generally suggests poor model fit; except in the case of large sample sizes, which can result in a statistic that is overly sensitive to departures in model fit. Because of this, Bollen (1989) recommended using multiple indicators of model fit. Generally, a chi-square ratio below 3 (Carmines & McIver, 1993) indicates good fit, whereas NNFI and CFI values at or above .90 indicate good fit (Bollen, 1989).

The goodness of fit statistics indicated good model fit for Hispanics (χ^2(N = 838, df = 2267) = 3473.89, p = 0.00; χ^2/df = 1.53; NNFI = .89; CFI = .90), African Americans ((χ^2(N = 467, df = 2267) = 2395.10, p = 0.03; χ^2/df = 1.06; NNFI = .98; CFI = .98), and Non-Hispanic Whites (χ^2(N = 419, df = 2267) = 2825.12, p = 0.00; χ^2/df = 1.25; NNFI = .91; CFI = .92). In other words, the fit statistics support a factor structure that corresponds with the five scales for the three ethnic groups.

The statistical tests associated with the factor loadings also support the five-scale factor structure, indicating that the factor loadings for the majority of the items were statistically significant. Generally, this pattern of statistically significant factor loadings held for the three ethnic groups, as shown in Tables 3, 4, and 5. All of the items were statistically significant for the Non-Hispanic Whites, as shown in Table 5. Only three items were not statistically significant for the Hispanics (one item on the AC factor and two items on the FS factor); whereas, only one item was not statistically significant for the African Americans on the SC factor, as shown in Tables 3 and 4, respectively. The fact that the majority of the factor loadings were statistically significant for the three samples supports the integrity of the five scales, academic confidence, behavior control, peer acceptance, social confidence, and family support; and suggests the factor structure may be relatively invariant across the three ethnic groups included in the study.

The inter-factor correlations were more similar in magnitude for both the Hispanics and Non-Hispanics Whites than for the African Americans. For these two groups the correlations of high magnitude (r > .4) were between factors 1 and 3 (for the Hispanics, r = .75 and for the Non-Hispanic Whites, r = .78), factors 1 and 4 (for the Hispanics, r = .57 and for the Non-Hispanic Whites, r = . 61), and factors 3 and 4 (for the Hispanics, r = .72 and for the Non-Hispanic Whites, r = .73); the remaining correlations for the two groups were lower than r = .4. In contrast, all of

the inter-factor correlations for the African Americans are uniformly high in magnitude (i.e. r > .5), which suggests the possibility of a higher order factor.

Next, correlations were examined to assess the relationship between the five CRISEE scales and the following outcome variables: SDPB, SEPB, ESTEEM, GRADES, HOMEWORK, and ABSENT. The magnitude of the resulting correlations differed only slightly from scale to scale, but differed greatly from outcome variable to outcome variable. Also, the magnitude of the correlations for all outcome variables, but one, was similar for the ethnic groups. The magnitude of the correlations between the scales and GRADES were high, ranging from .81 to.91; whereas the magnitude of the correlations approached zero for ABSENT, ESTEEM, SDPB, and SEPB. In contrast, the pattern of correlations between the scales and HOMEWORK varied across ethnic groups: the magnitude of the correlations were moderate for Hispanics and African Americans, ranging from .21 to .31, whereas the magnitudes were low for Non-Hispanic Whites, ranging from .004 to .18. Overall, the pattern of correlations suggests invariance across the three subpopulations for all outcome variables, except for HOMEWORK.

Conclusions

The current study provides evidence that the factor structure of the CRISEE corresponds with that of the five scales and it appears to be invariant for Hispanics, African Americans, and Non-Hispanic Whites. Two strands of evidence support the invariance of the scales across the three sub-populations: 1) The fit indices indicated that the five-factor structure was consistent with the data for all three groups and 2) the pattern of statistically significant loadings was similar across groups. Moreover, this evidence suggests that the proposed factor structure of the CRISEE is reasonably stable across multiple samples.

The pattern of correlations, in part, supported the invariance of the CRISEE across sub-populations. As stated before, the correlations suggest that for all three sub-populations the five

CRISEE scales are strongly related to GRADES, but only slightly related to ABSENT, ESTEEM, SDPB, and SEPB. What is of interest, however, is the lack of invariance for the variable, HOMEWORK. The findings suggest that coping resources influences the time spent on homework for both the Hispanics and African Americans, but not for Non-Hispanic Whites. Clearly, such findings warrant further research to figure out the source of these differences.

Overall, our findings suggest that the CRISEE scales may provide meaningful, distinct, and interpretable scores. Further research is necessary to evaluate the psychometric properties of the instrument, but at this point there is reason for cautious optimism that the CRISEE will be useful both as a counseling tool and as an assessment instrument for investigations of stress coping processes in children.

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Table 1

Cronbach's alpha coefficients of the CRISEE scales reported for Hispanics, African Americans, and Non-Hispanic Whites.

Scale	Hispanic	African American	Non-Hispanic Whites
Behavior Control	.8447	.8438	.8559
Peer Acceptance	.7578	.7905	.7831
Social Confidence	.7685	.8359	.8383
Academic Confidence	.8197	.7581	.7507
Family Support	.7540	.6339	.7663

Table 2

Descriptive Statistics for the Hispanics, African Americans, and Non-Hispanic Whites

	Sub-samples					
	Hispanic		African Americans		Non-Hispanic Whites	
Scales	M	SD	M	SD	M	SD
BC	57.46	26.60	56.85	26.39	62.48	25.65
PA	73.16	21.57	77.13	21.55	67.04	24.69
SC	54.07	20.45	60.31	22.54	51.30	22.52
AC	57.42	25.93	70.62	21.65	64.93	23.40
FS	68.43	22.40	76.39	17.36	68.50	21.28
Esteem	35.27	5.96	38.40	6.66	35.63	6.62
SDPB	7.27	4.87	6.74	4.66	5.49	4.35
SEPB	8.04	3.46	10.32	3.68	8.95	3.87
GRADES	2.34	1.02	2.06	.82	1.91	.96
ABSENT	1.17	.86	.91	.83	.96	.93
HOMEWORK	1.12	.76	1.17	.66	1.31	.75

Note. For Hispanics N = 812; for African Americans, N = 454; for Non-Hispanic whites N = 404.

Table 3

Factor Analyses of the CRISEE for Hispanics

Item no.	Paraphrased Item	Original Scale	Parameter Estimates Loadings 1	2	3	4	5
1	very good student	AC	.58	.0	.0	.0	.0
2	belong in my family	FS	.0	.0	.66	.0	.0
3	parents praise for doing well	FS	.0	.0	.59	.0	.0
4	misbehave in school	BC	.0	.0	.0	.0	.55
6	keep my feelings to myself	SC	.0	.22	.0	.0	.0
7	classmates are good to me	PA	.0	.0	.0	.55	.0
8	smarter than most students	AC	.40	.0	.0	.0	.0
9	students like the way I look	PA	.0	.0	.0	.54	.0
10	afraid to tell people what I think	SC	.0	.52	.0	.0	.0
11	sometimes hit someone	BC	.0	.0	.0	.0	.50
12	hide my true feelings	SC	.0	.49	.0	.0	.0
13	frequently tell lies	BC	.0	.0	.0	.0	.44
14	use time better than most	AC	.42	.0	.0	.0	.0
15	students like to talk to me	PA	.0	.0	.0	.65	.0
16	do fun things with my parents	FS	.0	.0	.58	.0	.0
18	spend time with parents	FS	.0	.0	.56	.0	.0
19	get into fights	BC	.0	.0	.0	.0	.53
20	not as smart as most students	AC	.33	.0	.0	.0	.0
21	am shy	SC	.0	.37	.0	.0	.0
22	frequently get angry	BC	.0	.0	.0	.0	.44

(table continues)

Table 3 (cont.)

Factor Analysis of the CRISEE for Hispanics

23	can talk to my family	FS	.0	.0	.54	.0	.0
24	afraid I will say the wrong thing	SC	.0	.45	.0	.0	.0
25	frequently misbehave	BC	.0	.0	.0	.0	.59
26	plan my work well	AC	.55	.0	.0	.0	.0
27	feel very safe at home	FS	.0	.0	.58	.0	.0
28	worry people will be angry	SC	.0	.47	.0	.0	.0
29	students tease me about looks	PA	.0	.0	.0	.50	.0
30	get work done before others	AC	.47	.0	.0	.0	.0
31	bothers to tell feelings	SC	.0	.53	.0	.0	.0
33	parents help with homework	FS	.0	.0	.33	.0	.0
34	turn in school work when due	AC	.53	.0	.0	.0	.0
35	**want family to love me more**	**FS**	**.0**	**.0**	**.0**	**.0**	**.0**
36	get things finished on time	AC	.57	.0	.0	.0	.0
37	trouble talking about feelings	SC	.0	.52	.0	.0	.0
38	frequently break rules	BC	.0	.0	.0	.0	.53
39	cannot keep mind on work	AC	.40	.0	.0	.0	.0
40	have temper tantrums	BC	.0	.0	.0	.0	.45
41	other students treat me fairly	PA	.0	.0	.0	.51	.0
42	problems at home	FS	.0	.0	.42	.0	.0
43	do not have many friends	PA	.0	.0	.0	.57	.0
44	do school work very well	AC	.62	.0	.0	.0	.0
45	lose control when upset	BC	.0	.0	.0	.0	.42
46	afraid to ask for what I want	SC	.0	.52	.0	.0	.0
48	class work is done on time	AC	.60	.0	.0	.0	.0

(table continues)

Table 3 (cont.)

Factor Analysis of the CRISEE for Hispanics

49	talk back to teachers	BC	.0	.0	.0	.0	.50
50	afraid to try new things	SC	.0	.47	.0	.0	.0
51	people think I look good	PA	.0	.0	.0	.54	.0
52	**afraid I will fail this grade**	**AC**	**.01**	**.0**	**.0**	**.0**	**.0**
53	parent(s) read to me	FS	.0	.0	.46	.0	.0
54	wanted more friends at school	PA	.0	.0	.0	.43	.0
56	do anything for people to like me	SC	.0	.36	.0	.0	.0
57	parents listen when worried	FS	.0	.0	.60	.0	.0
58	yell at people when angry	BC	.0	.0	.0	.0	.43
59	liked by most students at school	PA	.0	.0	.0	.62	.0
60	**want my family to help me more**	**FS**	**.0**	**.0**	**.0**	**.0**	**.0**
61	hard to make friends	PA	.0	.0	.0	.57	.0
63	throw things when angry	BC	.0	.0	.0	.0	.52
64	stay nervous at school	SC	.0	.51	.0	.0	.0
66	**run away from home**	**BC**	**.0**	**.0**	**.0**	**.0**	**.0**
68	get into much trouble	BC	.0	.0	.0	.0	.58
70	students make fun of me	PA	.0	.0	.0	.52	.0
71	talk to parents about problems	FS	.0	.0	.54	.0	.0
72	know answer in class	AC	.46	.0	.0	.0	.0
74	pick on students	BC	.0	.0	.0	.0	.46
76	keep thoughts to myself	SC	.0	.44	.0	.0	.0
77	liked by popular students	PA	.0	.0	.0	.51	.0
78	frequently feel nervous	SC	.0	.49	.0	.0	.0

(table continues)

Table 3

Factor Analysis of the CRISEE for Hispanics

79	get good grades on homework	AC	.55	.0	.0	.0	.0
80	get along well with other people	PA	.0	.0	.0	.59	.0

Note. The factor loadings that are NOT statistically significant are underlined and its associated item is presented in boldfaced type. Factor labels--Factor 1 = AC; Factor 2 = SC; Factor 3 = FS; Factor 4 = PA; and Factor 5 = BC.

Table 4

Factor Analyses of the CRISEE for African Americans

Item no.	Paraphrased Item	Original Scale	Parameter Estimates Loadings 1	2	3	4	5
1	very good student	AC	.66	.0	.0	.0	.0
2	belong in my family	FS	.0	.0	.67	.0	.0
3	parents praise for doing well	FS	.0	.0	.65	.0	.0
4	misbehave in school	BC	.0	.0	.0	.0	.54
6	**keep my feelings to myself**	**SC**	**.0**	**.02**	**.0**	**.0**	**.0**
7	classmates are good to me	PA	.0	.0	.0	.55	.0
8	smarter than most students	AC	.42	.0	.0	.0	.0
9	students like the way I look	PA	.0	.0	.0	.56	.0
10	afraid to tell people what I think	SC	.0	-.57	.0	.0	.0
11	sometimes hit someone	BC	.0	.0	.0	.0	.49
12	hide my true feelings	SC	.0	-.55	.0	.0	.0
13	frequently tell lies	BC	.0	.0	.0	.0	.38
14	use time better than most	AC	.44	.0	.0	.0	.0
15	students like to talk to me	PA	.0	.0	.0	.64	.0
16	do fun things with my parents	FS	.0	.0	.60	.0	.0
18	spend time with parents	FS	.0	.0	.56	.0	.0
19	get into fights	BC	.0	.0	.0	.0	.51
20	not as smart as most students	AC	.32	.0	.0	.0	.0
21	am shy	SC	.0	-.41	.0	.0	.0
22	frequently get angry	BC	.0	.0	.0	.0	.35

(table continues)

Table 4

Factor Analysis of the CRISEE for African Americans

23	can talk to my family	FS	.0	.0	.55	.0	.0
24	afraid I will say the wrong thing	SC	.0	-.40	.0	.0	.0
25	frequently misbehave	BC	.0	.0	.0	.0	.55
26	plan my work well	AC	.55	.0	.0	.0	.0
27	feel very safe at home	FS	.0	.0	.64	.0	.0
28	worry people will be angry	SC	.0	.55	.0	.0	.0
29	students tease me about looks	PA	.0	.0	.0	.53	.0
30	get work done before others	AC	.41	.0	.0	.0	.0
31	bothers to tell feelings	SC	.0	.54	.0	.0	.0
33	parents help with homework	FS	.0	.0	.55	.0	.0
34	turn in school work when due	AC	.54	.0	.0	.0	.0
35	want family to love me more	FS	.0	.0	.37	.0	.0
36	get things finished on time	AC	.57	.0	.0	.0	.0
37	trouble talking about feelings	SC	.0	.56	.0	.0	.0
38	frequently break rules	BC	.0	.0	.0	.0	.49
39	cannot keep mind on work	AC	.48	.0	.0	.0	.0
40	have temper tantrums	BC	.0	.0	.0	.0	.52
41	other students treat me fairly	PA	.0	.0	.0	.56	.0
42	problems at home	FS	.0	.0	.52	.0	.0
43	do not have many friends	PA	.0	.0	.0	.61	.0
44	do school work very well	AC	.68	.0	.0	.0	.0
45	lose control when upset	BC	.0	.0	.0	.0	.58
46	afraid to ask for what I want	SC	.0	.58	.0	.0	.0

(table continues)

Table 4 (cont.)

Factor Analysis of the CRISEE for African Americans

48	class work is done on time	AC	.56	.0	.0	.0	.0
49	talk back to teachers	BC	.0	.0	.0	.0	.40
50	afraid to try new things	SC	.0	.60	.0	.0	.0
51	people think I look good	PA	.0	.0	.0	.62	.0
52	afraid I will fail this grade	AC	.29	.0	.0	.0	.0
53	parent(s) read to me	FS	.0	.0	.51	.0	.0
54	wanted more friends at school	PA	.0	.0	.0	.48	.0
56	do anything for people to like me	SC	.0	.54	.0	.0	.0
57	parents listen when worried	FS	.0	.0	.61	.0	.0
58	yell at people when angry	BC	.0	.0	.0	.0	.41
59	liked by most students at school	PA	.0	.0	.0	.63	.0
60	want my family to help me more	FS	.0	.0	.10	.0	.0
61	hard to make friends	PA	.0	.0	.0	.59	.0
63	throw things when angry	BC	.0	.0	.0	.0	.56
64	stay nervous at school	SC	.0	.58	.0	.0	.0
66	run away from home	BC	.0	.0	.35	.0	.0
68	get into much trouble	BC	.0	.0	.0	.0	.58
70	students make fun of me	PA	.0	.0	.0	.58	.0
71	talk to parents about problems	FS	.0	.0	.55	.0	.0
72	know answer in class	AC	.50	.0	.0	.0	.0
74	pick on students	BC	.0	.0	.0	.0	.51
76	keep thoughts to myself	SC	.0	.44	.0	.0	.0
77	liked by popular students	PA	.0	.0	.0	.58	.0

(table continues)

Table 4 (cont.)

Factor Analysis of the CRISEE for African Americans

78	frequently feel nervous	SC	.0	.51	.0	.0	.0
79	get good grades on homework	AC	.59	.0	.0	.0	.0
80	get along well with other people	PA	.0	.0	.0	.60	.0

Note. The factor loadings that are NOT statistically significant are underlined and its associated item is presented in boldfaced type. Factor labels--Factor 1 = AC; Factor 2 = SC; Factor 3 = FS; Factor 4 = PA; and Factor 5 = BC.

Table 5

Factor Analyses of the CRISEE for Non-Hispanic Whites

Item no.	Paraphrased Item	Original Scale	Parameter Estimates Loadings 1	2	3	4	5
1	very good student	AC	.56	.0	.0	.0	.0
2	belong in my family	FS	.0	.0	.62	.0	.0
3	parents praise for doing well	FS	.0	.0	.65	.0	.0
4	misbehave in school	BC	.0	.0	.0	.0	.60
6	keep my feelings to myself	SC	.0	.27	.0	.0	.0
7	classmates are good to me	PA	.0	.0	.0	.59	.0
8	smarter than most students	AC	.36	.0	.0	.0	.0
9	students like the way I look	PA	.0	.0	.0	.56	.0
10	afraid to tell people what I think	SC	.0	.58	.0	.0	.0
11	sometimes hit someone	BC	.0	.0	.0	.0	.51
12	hide my true feelings	SC	.0	.57	.0	.0	.0
13	frequently tell lies	BC	.0	.0	.0	.0	.43
14	use time better than most	AC	.43	.0	.0	.0	.0
15	students like to talk to me	PA	.0	.0	.0	.60	.0
16	do fun things with my parents	FS	.0	.0	.63	.0	.0
18	spend time with parents	FS	.0	.0	.62	.0	.0
19	get into fights	BC	.0	.0	.0	.0	.56
20	not as smart as most students	AC	.42	.0	.0	.0	.0
21	am shy	SC	.0	.30	.0	.0	.0
22	frequently get angry	BC	.0	.0	.0	.0	.50

(table continues)

Table 5 (cont.)

Factor Analysis of the CRISEE for Non-Hispanic Whites

23	can talk to my family	FS	.0	.0	.61	.0	.0
24	afraid I will say the wrong thing	SC	.0	.45	.0	.0	.0
25	frequently misbehave	BC	.0	.0	.0	.0	.62
26	plan my work well	AC	.53	.0	.0	.0	.0
27	feel very safe at home	FS	.0	.0	.54	.0	.0
28	worry people will be angry	SC	.0	.48	.0	.0	.0
29	students tease me about looks	PA	.0	.0	.0	.54	.0
30	get work done before others	AC	.39	.0	.0	.0	.0
31	bothers to tell feelings	SC	.0	.58	.0	.0	.0
33	parents help with homework	FS	.0	.0	.53	.0	.0
34	turn in school work when due	AC	.58	.0	.0	.0	.0
35	want family to love me more	FS	.0	.0	.13	.0	.0
36	get things finished on time	AC	.61	.0	.0	.0	.0
37	trouble talking about feelings	SC	.0	.60	.0	.0	.0
38	frequently break rules	BC	.0	.0	.0	.0	.61
39	cannot keep mind on work	AC	.50	.0	.0	.0	.0
40	have temper tantrums	BC	.0	.0	.0	.0	.47
41	other students treat me fairly	PA	.0	.0	.0	.54	.0
42	problems at home	FS	.0	.0	.54	.0	.0
43	do not have many friends	PA	.0	.0	.0	.61	.0
44	do school work very well	AC	.64	.0	.0	.0	.0
45	lose control when upset	BC	.0	.0	.0	.0	.54
46	afraid to ask for what I want	SC	.0	.55	.0	.0	.0

(table continues)

Table 5 (cont.)

Factor Analysis of the CRISEE for Non-Hispanic Whites

48	class work is done on time	AC	.63	.0	.0	.0	.0
49	talk back to teachers	BC	.0	.0	.0	.0	.48
50	afraid to try new things	SC	.0	.50	.0	.0	.0
51	people think I look good	PA	.0	.0	.0	.56	.0
52	afraid I will fail this grade	AC	.24	.0	.0	.0	.0
53	parent(s) read to me	FS	.0	.0	.48	.0	.0
54	wanted more friends at school	PA	.0	.0	.0	.46	.0
56	do anything for people to like me	SC	.0	.43	.0	.0	.0
57	parents listen when worried	FS	.0	.0	.61	.0	.0
58	yell at people when angry	BC	.0	.0	.0	.0	.35
59	liked by most students at school	PA	.0	.0	.0	.61	.0
60	want my family to help me more	FS	.0	.0	-.27	.0	.0
61	hard to make friends	PA	.0	.0	.0	.57	.0
63	throw things when angry	BC	.0	.0	.0	.0	.52
64	stay nervous at school	SC	.0	.51	.0	.0	.0
66	run away from home	BC	.0	.0	-.25	.0	.0
68	get into much trouble	BC	.0	.0	.0	.0	.62
70	students make fun of me	PA	.0	.0	.0	.59	.0
71	talk to parents about problems	FS	.0	.0	.54	.0	.0
72	know answer in class	AC	.50	.0	.0	.0	.0
74	pick on students	BC	.0	.0	.0	.0	.51
76	keep thoughts to myself	SC	.0	.46	.0	.0	.0
77	liked by popular students	PA	.0	.0	.0	.48	.0

(table continues)

Table 5 (cont.)

Factor Analysis of the CRISEE for Non-Hispanic Whites

78	frequently feel nervous	SC	.0	.52	.0	.0	.0
79	get good grades on homework	AC	.56	.0	.0	.0	.0
80	get along well with other people	PA	.0	.0	.0	.59	.0

Note. The factor loadings that are NOT statistically significant are underlined and its associated item is presented in boldfaced type. In this table all factor loadings are statistically significant. Factor labels--Factor 1 = AC; Factor 2 = SC; Factor 3 = FS; Factor 4 = PA; and Factor 5 = BC.

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