A New Measure and Conception of Resilience for College Students

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We developed a new measure of resilence for college students, but one that should be appropriate for other older adolescents and adults. There are many definitions of resilience, most of them including some idea that one's performance is better than would be expected by examination of current or past circumstances. For example, Miller (2003) defined resilience as "accomplishment that would not have been predicted because of the individual's situation" (p. 292); Masten, Hubbard, et al. (1999) defined it as "the class of phenomena involving successful adaptation in the context of significant threats of development" (p. 143). However, some investigators (e.g., Jew, Green, and Kroger, 1997) have developed measures of resilience solely of personality traits characteristic of resilient individuals. And there are many studies of resilience that do not include independent assessments of prior difficulties and current functioning. Our measure involves an assessment of current functioning and a new questionnaire measure assessing a wide range of current and past risk factors.

Our new assessment of life difficulties is wide-ranging, covering many areas; it was based on items from prior measures (Carr and Vandiver, 2001; Werner and Smith, 1992), DSM-IV criteria, and other items we added. Werner

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and Smith's (1992) longitudinal study of 505 individuals regarded approximately 1/3 of them "at risk" as children due to poverty, parent psychopathology, or other severe psychological stressor. Of those at risk, approximately 1/3 were designated "resilient" later due to high functioning in career, marriage and parenting. We were interested to see if our college population followed a distribution similar to this one.

We also used control-mastery theory, a contemporary cognitive psychodynamic theory (Weiss, Sampson, et al., 1986), to conceptualize resilience, This theory is so named because it assumes that people have some control over their unconscious mind and that people's primary motivation is to master their difficulties. In this model, psychopathology and many personal difficulties are attributed to failures to master guilt (Bush, 1989). Guilt can occur when one thinks she has hurt a loved one by having a life of one's own or is being too independent of parents or other loved ones (separation guilt); when one thinks she has hurt someone important by surpassing that person (survivor guilt); when one feels an exaggerated sense of responsibility for a loved one (omnipotent responsibility guilt); or when one has a poor self-concept (assumed to be in compliance with a parent's negative view of the self; and thus called self-hate guilt). We propose that resilience must involve mastery of guilt which would normally arise from life difficulties. Thus, we hypothesized that high risk/high adjustment (resilient) college students would have less guilt than high risk/low adjustment (non-resilent) students.

METHOD

Our participants were 136 traditional-aged (18-22 years) college women. They completed 4 Likert-type self-report questionnaires and gave some demographic information. Our new Risk Factors Assessment (RFA) included ten clusters of risk factors from the person's past: economic problems; disruption of the family unit; health problems-self; health problems-family member(s); educational problems; social/environmental difficulties; chronic family discord; abuse/neglect; discrimination; and other difficulties (e.g., victim of a crime; delinquency record; teen pregnancy). Several examples of difficulties were listed under each of the ten broad category headings. For example, under the "Economic Problems" heading, these were the specific examples: poverty/inadequate finances; inadequate welfare support; homelessness/ inadequate housing; financial problems in college. Each specific problem could be checked by the participant if it applied to her. If one or more boxes were checked for a cluster, participants were asked to write a sentence or two to describe the problems or circumstances. This measure was then quantified by scoring each of the 10 clusters on a 0 to 4 scale, depending on whether none or approximately 25%, 50%, 75:, or 100% of the examples had been checked. Thus, the total scores on the RFA could range from 0 to 40. The full measure is appended.

To validate this new measure, we used the measure of Jew, Green, and Kroger (1997), the Resiliency Belief System scale (RBS), which assesses beliefs that promote psychological resilience. The RBS is based on the work of Mrazek and Mrazek (1987), who articulated 12 characteristics of resilient children. It is composed of 3 subscales: (1) Active Skill Acquisition (15 items assessing ability to

learn about the environment and use resources, e.g., "I can feel when a situation is dangerous;" "My professors or counselors have been very helpful to me through rough times"—we modified wording slightly to be more appropriate for a college sample); (2) Future Orientation (15 items assessing optimism and ability to imagine the future positively, e.g., "Someday I will be able to use what I have learned to help others; "The past is not as important as the future"); and (3) Independence and Risk-taking (15 items on early maturity and conscious risk-taking, such as "Sometimes I need to take risks to make things better" and "Some people cannot make it better because of their childhood.")

To assess current functioning, we used the Student Adaptation to College Questionnaire (SACQ, Baker & Siryk, 1984, 1989). This widely-used measure has excellent psychometric properties. The SACQ is straightforward and it is composed of four subscales: (1) Academic Adjustment (24 items, including "My academic goals and purposes are well defined," and "I really haven't had much motivation for studying lately"); (2) Social Adjustment (20 items, such as, "I feel that I fit in well as part of the college environment," and "I am satisfied with the extracurricular activities available at college"); (3) Personal/Emotional Adjustment (15 items, including both physical and psychological items, such as, "I have been feeling in good health lately," and "I have been getting angry too easily lately"); (4) Goal Commitment/Institutional Attachment, which assesses attachment not in the attachment theory sense, but in the sense of commitment to the particular institution and to graduation from college (15 items, including, "I expect to stay at college for a bachelor's degree").

Our measure of control-mastery guilt was the Interpersonal Guilt Questionnaire developed by O'Connor and her colleagues (O'Connor, Berry,

Weiss, Bush, & Sampson, 1997). The IGQ has subscales for (1) Survivor Guilt, or guilt about surpassing a loved one (22 items, such as "I am uncomfortable talking about my achievements in social situations;" and, "It makes me very uncomfortable to receive better treatment than the people I am with"); (2) Separation Guilt, or guilt about being different than a loved one (15 items, including, "I feel that bad things happen to my family if I do not stay in close contact with them;" "It is difficult to see my parents' flaws;" and "I am very reluctant to express an opinion that is different from the opinions held by my family or friends"); (3) Omnipotent Responsibility Guilt, or guilt about an exaggerated sense of responsibility for others (14 items, such as, "I worry about hurting other people's feelings if I turn down an invitation from somebody who is eager for me to accept;" and "I worry a lot about the people I love even when they seem to be fine;" and (4) Self-Hate Guilt, which is conceptualized in control-mastery theory as compliance with negative parental views of the self (16 items, such as, "I deserve to be rejected by people;" and "I feel there is something inherently bad about me"). This measure has been validated in many samples of college students and others; the 4th subscale, Self-Hate Guilt is most highly correlated with traditional measures of psychopathology.

RESULTS AND DISCUSSION

The primary purpose of this study was to introduce a measure of resilience, based on a new measure of prior life difficulties or risk, appropriate for older adolescents and adults and to provide some validation data for it with a group of college students. (For non-college people, another appropriate measure of adjustment, such as the SCL-90, would have to be substituted for the SACQ.)

Of our 136 participants, 20 (14.7%) scored one standard deviation or more above the mean on the Risk Factors Assessment (RFA Full Scale M = 5.10; SD = 3.82). It is not surprising that this is considerably under the 1/3 prevalence of high risk found in Werner and Smith's longitudinal sample, given that we used a selected sample, college students, and being in college is, in itself, an indication of having overcome risk. Further, our criterion, the RFA, is perhaps a more stringent criterion of risk than used by those investigators. Of these 20 high-risk participants, 7 (35%) had Full Scale SACQ scores above the mean (FS SACQ M = 423). This does correspond with the roughly 1/3 of high risk people that earlier study found to be resilient, thus lending some validity to our definition and measure of resilience.

The range of full scale RFA scores was 0-19 (maximum possible = 40) in this college sample. Intercorrelations of the 10 RFA cluster scores with one another were all positive and ranged from .01 to .70, with many in the .30-.50 range.

As expected, correlations between RFA scores and college adjustment were generally negative, with the exception of the Social Adjustment subscale, which was not correlated with the RFA. Other correlations of the Full Scale RFA with SACQ scores were as follows: with Academic Adjustment, -.22; with Personal/Emotional Adjustment, -.24; with Attachment/Goal Commitment, -.19; and with Full Scale SACQ, -.26 (all reported r's significant at $p < .05$ or better).

We expected that RFA scores would be negatively correlated with the Resiliency Belief System (RBS) scores, since generally, high risk is generally associated with lower adjustment and lower resiliency scores. As expected, RFA Full Scale and RBS Full Scale scores were negatively correlated (r = -.28). Of the

subscales of the RBS, the Active Skills subscale (r = -.24) and the Future Orientation subscale (r = -.35) were significantly correlated with Full Scale RFA scores; but the Independence subscale of the RBS was not correlated with Full Scale RFA (r = -.08, n.s.).

We expected that those defined as high in resilience by our assessment (high risk/high adjustment) would have higher scores on Jew, et al.'s Resiliency Belief System scale (RBS) than those assessed as non-resilient (high risk/low adjustment). This was confirmed for RBS Full Scale scores, where resilient participants (M = 214.6) had higher scores than non-resilient participants (M = 189.1; t = -2.48, $p < .05$). A similar pattern of results was found for the Active Skill Acquistion and Future Orientation subscales of the RBS; for the Independence/Risk-Taking subscale, there was no significant difference between the two resiliency groups, although the difference was in the expected direction.

However, because the Resiliency Belief System scale does not assess resiliency directly, it is possible that many participants who score high on the RBS do so simply because they have an optimistic attitude, and not because they have overcome adversity (the RBS includes such items as, "No matter what happens I will make it;" "I have a lot of hope;" and "Everone is able to be loved"). To investigate this possibility, we investigated the RFA scores of the 21 participants who had RBS scores one SD or more above the mean on that scale. Of those 21 women, only 3 were assessed as high risk (one SD or more above the mean on our new RFA). Thus, the large majority of high RBS scorers were low risk people, raising a question about the validity of the RBS as a measure of resiliency. If this conclusion is valid, it also raises a question about our own use of this measure as a validity measure for our new RFA. However, the overall

pattern of our findings with other measures, especially the SACQ, lend support for the validity of our manner of assessing resiliency.

The second goal of our study was to test the idea that resilience involves overcoming guilt that might develop based on prior life difficulties. Results here were mixed. Generally (for all subjects combined), we would expect that being at risk (by the RFA measure) would be positively associated with guilt. Full Scale RFA scores correlated positively, as expected, with Self-Hate guilt (r = .37), but negatively with Separation guilt (r = -.24). The IGQ assesses consious guilt, and it may well be that students who have experienced trauma earlier in their families are eager to leave and not overtly concerned about being different from sometimes difficult families they leave behind (the kinds of items on the Separation Guilt scale of the IGQ). The two other scales of the IGQ, however, showed no correlation with the RFA.

Further analyses looked at the small number of resilient students (high risk/high adjustment). These 7 students were significantly lower in Separation Guilt than the 13 non-resilient students (high risk,/low adjustment; t = 2.64, p < .05), suggesting having overcome guilt about having a different life than their families might be important in their good adjustment. But for other types of guilt, differences were not significant, although in the predicted direction. Overall, these results give some support for the hypothesis about the relationship between control-mastery guilt and risk and resilience.

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Risk Factors Assessment

Please indicate if any of these events below have occurred in your life in the box next to the corresponding event. A number of events are not specified further so that you can apply the terms as they fit you. Also, please explain briefly the circumstances involved, **including your age(s) at the time of the event**. To make answering easier, items are grouped by topic, and you may choose none, one, or more than one of the items within a particular group. If more than one item applies to you within a group, please elaborate on your most relevant answer(s) in a sentence or two—an explanation is not necessary for every item. For example, an explanation for section 1 might read "Because of inadequate welfare support while I was age 5-7, my family lived in poverty and was often homeless." All answers are confidential and are available to only those researchers involved in this research, so please answer as candidly as possible. You are not required to answer any part of this assessment, and you may end your participation at any time.

1. **Economic Problems**

- ☐ Poverty/Inadequate finances
- ☐ Inadequate welfare support
- ☐ Homelessness/Inadequate housing
- ☐ Financial problems in college

Please explain:

2. **Health Problems-Self**

- ☐ Moderate to severe perinatal stress when mother was pregnant with you
- ☐ Frequent or persistent illness
- ☐ Frequent or persistent mental illness
- ☐ Below normal physical development or handicap
- ☐ Eating disorder
- ☐ Alcohol/Drug Abuse or Dependency
- ☐ Serious physical trauma, injury, or accident

Please explain:

3. **Health Problems-Family Member(s)**

- ☐ Sibling with moderate to severe perinatal stress
- ☐ Sibling with frequent illnesses
- ☐ Sibling with below normal physical development or handicap
- ☐ Sibling experienced serious physical trauma, injury, or accident
- ☐ Parent/Guardian with frequent illnesses
- ☐ Parent/Guardian with below normal physical development or handicap
- ☐ Parent/guardian experienced serious physical trauma, injury, or accident

Please explain:

4. **Educational Problems**

- ❑ Academic problems
- ❑ Learning disability
- ❑ Discord with teachers or classmates
- ❑ Inadequate school environment

Please explain:

5. **Social Environment**

- ❑ Death/loss of friend
- ❑ Inadequate social system
- ❑ Move to a new country/culture
- ❑ Living in a neighborhood with high crime/low morale
- ❑ Lack of opportunity in social environment

Please explain:

6. **Chronic discord in family**

- ❑ Parent alcoholic, mentally ill, or retarded
- ❑ Parent remarried, conflict with stepparent
- ❑ Chronic conflict between parents
- ❑ Conflict with peers
- ❑ Conflict with parent
- ❑ Breakup of long-term romantic relationship between self and loved-one
- ❑ Marital separation of parents or guardians
- ❑ Poor structure and few rules in the household
- ❑ Poor family support and guidance
- ❑ Many siblings in household
- ❑ Un- or underemployed
- ❑ Threat of job loss
- ❑ Dissatisfying/stressful job
- ❑ Parent/older sibling grossly overprotective
- ❑ Inadequate discipline
- ❑ Extreme conflict with siblings
- ❑ Family member ostracized from rest of family
- ❑ Ostracized from family or family member(s)
- ❑ Other chronic discord in family

Please explain:

7. **Abuse/Neglect**

- ❑ Emotional/psychological abuse
- ❑ Physical abuse
- ❑ Sexual abuse
- ❑ Incest
- ❑ Emotional neglect
- ❑ Basic needs not provided for

Please explain:

8. **Discrimination**

- ❑ Ethnic/Racial
- ❑ Religious
- ❑ Socioeconomic Status/Class
- ❑ Gender
- ❑ Sexual Orientation
- ❑ Age
- ❑ Other discrimination

Please explain:

9. **Disruption of Family Unit**

- ❑ Mother not married when you were born
- ❑ Prolonged disruptions of family life
- ❑ Prolonged separation from parent/guardian
- ❑ Mother pregnant or birth of sibling before you were 2
- ❑ Parent/guardian died
- ❑ Parent/guardian absent permanently (divorced, separated)
- ❑ Sibling died
- ❑ Sibling left home
- ❑ Foster home placement
- ❑ Parent/Guardian remarried
- ❑ Marriage during your teens
- ❑ Divorce of parents/guardians
- ❑ Other disruption of family unit

Please explain:

10. **Other Risk Factors**

- ☐ Victim of crime
- ☐ Victim of violent crime
- ☐ Witness to violent crime
- ☐ Exposure to disaster, war, or other hostilities
- ☐ Unavailability of social service agencies
- ☐ Discord with non-family caregiver: counselor, social worker, physician, childcare provider, etc.
- ☐ Extremely disappointed by significant influence: parent, role model, mentor, etc.
- ☐ Below normal intellectual status
- ☐ Below normal psychological status
- ☐ Need for remedial education; placement in special class/institution
- ☐ Need for (in- or outpatient) mental health care
- ☐ Delinquency record
- ☐ Mental health problem
- ☐ School failure
- ☐ Teenage pregnancy

Please explain:

11. Anything else? Please explain: