

## **The Predictable Instability of Psychological Distress in College Students: A Comment on Flett, Vredenburg, and Krames**

**Carolyn M. Pepper<sup>1,2</sup> and James C. Coyne<sup>1</sup>**

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*Flett, Vredenburg, and Krames (1995) claim that their data support the view that the apparent instability in distress among college students is artifactual. However, they have merely demonstrated that distress among college students is an unstable phenomena. Their argument that changes in distress scores have statistical rather than substantive explanations erroneously assumes that instability in distress scores is equivalent to error of measurement.*

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Vredenburg, Flett, and Krames (1993) offered a spirited defense of self-reported distress in college students as an appropriate analogue for diagnosable depression in patient populations. They argued that the widespread concerns about a reliance on studies of self-reported distress in college students for this purpose are "not supported by existing empirical evidence" (p. 339). One such concern has been that elevations in self-reported distress tend to be short-lived, unlike the long-standing symptoms found in major depression (for a review of relevant literature see Coyne, 1994). Consistent with other studies, for instance, Zimmerman (1986) found that over half of the students scoring above an established cutoff on the Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erlbaugh, 1961) fell below the cutoff when tested a week later. However, Vredenburg *et al.* (1993) argued that the observed decreases in elevated

<sup>1</sup>Health Mood and Stress Project, Department of Family Practice, University of Michigan Medical School, 1018 Fuller Street, Ann Arbor, Michigan 48109-0708.

<sup>2</sup>To whom correspondence should be addressed.

scores which have commonly been reported "may be largely artifactual" (p. 334). According to Vredenburg *et al.* (1994), such decreases may be parsimoniously explained in terms of a "fundamental law of statistics," regression to the mean. Flett, Vredenburg, and Krames (1995) have now presented analyses which they claim establish their earlier point that the apparent instability in distress among college students is because "some of the individuals with scores above the mean have values that have been elevated for reasons that are more statistical than substantive in nature" (p. 411).

Flett *et al.* (1995) administered the BDI, a measure of psychological distress during the last week, on two occasions 3 months apart. It was found that 40% of the college students who scored 15 or above at the first administration failed to do so at the second. Additional analyses indicated that for the entire sample, students scoring above the mean on the first occasion scored significantly lower on the second occasion and those scoring below the mean scored significantly higher. This reduction in scores was interpreted as regression to the mean due to error of measurement.

The data presented support an even more parsimonious interpretation: distress in college students is temporally unstable. Even in the absence of any error of measurement, assessments of distress across occasions would not be perfectly correlated and it is conceivable that Flett *et al.* could have obtained a similar pattern of results with a perfectly reliable measure of current distress. Furthermore, such fluctuations may well represent salient changes in distress level of particular individuals which can be related to variations in other variables.

Instability of test scores across occasions is to be expected when a construct such as distress is being assessed in a college-student population. It is not mysterious that many students who report elevations in distress on a particular occasion will show a reduction in scores upon subsequent testing because their distress has been resolved. Likewise, students who have temporary improvements in their mood will suffer declines. It is reasonable to expect that the occurrence of circumstances affecting transient elevations and declines in distress will have an approximately normal distribution, and Flett and co-workers' analyses are consistent with this being the case. The subsequent movement of scores could be described as a form of regression to the mean which is dependent on the effects of another variable rather than measurement error, as proposed by Flett. This type of regression predates classical test theory (Galton, 1877) and rests on the assumption that extreme scores arise from relatively rare combinations of antecedent events which are unlikely to recur on the second testing (Nesselroade, Stigler, & Baltes, 1980; Furby, 1973; Clarke, Clark, & Brown, 1960). Rather than viewing regression to the mean as a "statistical artifact," investigating the nature of these fluctuations can enhance our under-

standing of how other variables operate to change distress scores. We could strive to develop more stable measures of distress, but the question of validity would arise, in that we would be risking drifting away from the existing meaning of the construct. Greater stability in the kinds of discomfort and self-dissatisfaction tapped by elevations in scores on self-report measures of distress might well represent neuroticism.

It becomes difficult or impossible to quantify the effects of regression to the mean on an unstable variable. We agree with Hsu (1995) that it is unrealistic to assume stability of true scores when the nature of the phenomena of interest is characterized by instability. Instead, exploration of the correlates of such elevations and declines can allow determination of the extent to which such fluctuations should be interpreted as substantive changes or—having completed an exhaustive consideration of such influences—as statistical artifacts. Indeed, a large and growing body of literature profitably explores the intraindividual and interindividual correlates of such departures from individual and group mean for mood and distress scores (Bolger & Schilling, 1991; Tennen, Suls, & Affleck, 1991). Flett and Hewitt themselves have published a number of studies in which correlates of distress scores are examined. Consequently, we are truly puzzled by Flett and co-workers' argument. Are Flett and his colleagues reevaluating the interpretations of the correlates of distress they have made in recent empirical papers?

In dismissing the instability of the BDI as a statistical artifact, Flett *et al.* neglect the fundamental difference between regular mood fluctuations and diagnosable mood disorders. This distinction is further blurred by the authors' consistent use of the labels "depression" and "depressive symptoms" in referring to elevations in distress scores among college students. As noted elsewhere, this label is unjustified and inaccurate (Beck, Steer, & Garbin, 1988; Coyne, 1994; Coyne & Schwenk, 1995). Many of the items on self-report measures of distress decidedly do not refer to depressive symptoms, and most others are highly ambiguous. In the absence of mood disturbance, complaints of problems with sleep and concentration are probably not most appropriately construed as depressive symptoms.

Undoubtedly there is error in the measurement of distress, as there is with any psychological construct. However, this paper by Flett *et al.* moves us no closer to understanding its magnitude or role in the study of distress among college students.

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