Brief Report

Impact of the Repressive Personality Style on the Measurement of Psychological Distress in Children and Adolescents with Chronic Illness: An Example from Hemophilia

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Received March 17, 1995; accepted August 14, 1995

Described the impact of the repressive personality style on the measurement of psychological distress among children and adolescents with hemophilia. Two groups were compared on parent and self-report measures of anxiety and depression: a nondefensive group (n = 34) with low distress; and a highly defensive group (n = 26) who were identified as having a repressive personality style and who also reported low distress. Consistent with hypotheses, highly defensive children reported comparable levels of anxiety and lower levels of depression than nondefensive children. On the other hand, mothers of highly defensive children and adolescents described them as more distressed than mothers of nondefensive (self-assured) children. Findings underscore the importance of including data from other informants, (e.g., parents, teachers, or peers) to avoid misleading findings based on self-reports of anxiety and depression obtained from highly defensive children.

KEY WORDS: repressive personality style; hemophilia; anxiety; depression; chronic illness in children; psychological distress.

Preparation of this manuscript was supported in part by Grant MCH-59065 from the Maternal and Child Health Bureau (Title V, Social Security Act, Health Resource and Services Administration). The authors acknowledge the assistance of Daniel A. Weinberger in this work. A report based on data from the entire sample of this multisite study has been published in Pediatrics (1995), 96, 1062-1069.

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The measurement of psychological dysfunction in children with chronic health conditions poses considerable methodological challenges, including the limitations of self-reports and the need to incorporate the perspectives of multiple informants (Perrin, Ayoub, & Wilett, 1993; Perrin, Stein, & Drotar, 1991). Although the factors that affect the interpretation of self-report data have not been well-documented in pediatric populations, extreme defensiveness has been noted to have a significant impact on the analysis and interpretation of adults' and children's self-reports. Researchers have identified individuals, known as repressors, who are highly motivated to report low levels of subjective psychological distress (anxiety and depression) that differ markedly with physiologic evidence and other observers' (parents, teachers, or peers) reports that consistently indicate they are in fact highly distressed (Canning, Canning, & Boyce, 1992; Fritz, Spirito, & Young, 1994; Weinberger & Davidson, 1994; Weinberger & Schwartz, 1990; Weinberger, Schwartz, & Davidson, 1979). The validity of the repressive defensive style, which is a stable personality attribute, has been well-established in adults, and presents significant challenges for the measurement of psychological distress in various populations, including children with chronic health conditions (Weinberger, 1990).

At least two studies have identified significant numbers of children with repressive personality styles among samples with chronic health conditions. Fritz et al. (1994) classified one-third of a sample of children with asthma (n = 83) as repressors. Canning et al. (1992) categorized a higher percentage of children (52%) with cancer (n = 31) as repressors than physically healthy children (n = 25, 30%) and hypothesized that a repressive personality style accounted for the lower levels of self-reported depression found among children with cancer.

However, the implications of the repressive personality style for analysis and interpretation of parent versus self-report data among children with chronic health conditions have not been clearly documented. Theory and research (Weinberger, 1990) suggest that one would expect a predictable discrepancy between findings based on self versus other informants' reports of psychological distress among children with repressive personality styles. Based solely on self-report data, children and adolescents with repressive personality styles would be expected to report levels of psychological distress that are comparable to or lower than that of nondefensive children whose self-reports reflect a "true" pattern of age-appropriate psychological distress. On the other hand, "repressors" have been consistently noted by other informants and observed in laboratory situations to experience high, and clinically significant levels of psychological distress (Weinberger, 1990).

The present study was designed to clarify the impact of the repressive personality style on the measurement of psychological distress (anxiety and depression) based on self and parental reports within a multisite sample of children and adolescents with hemophilia, about half of whom also had HIV.
infection. To our knowledge, such a study has not been conducted in any pediatric chronic illness population but might have particular significance for children and adolescents with hemophilia for several reasons. Prior studies of the psychological adjustment of children with hemophilia have relied primarily on self-reports (Handford, Mayes, Bixler, & Mattison, 1986; Steinhausen, 1976, 1981), which provide misleading findings for highly defensive children. A second reason for conducting this study with this population was based on empirical findings. In a recent study, surprisingly few differences in self-reported psychological distress were identified in HIV-infected versus noninfected children and adolescents with hemophilia (Drotar, Agle, Eckl, & Thompson, 1995). The possibility that these findings could be explained by differences in the number of repressors versus self-assured children in the two groups warranted additional study of this sample.

Based on theory and research concerning the repressive personality style (Weinberger, 1990), we expected that children and adolescents with hemophilia who demonstrated a repressive personality style would report levels of psychological distress (anxiety and depression) that were either comparable to or lower than that of children with the same chronic condition who demonstrated more adaptive (e.g., self-assured) personality styles. On the other hand, we expected that other informants, in this instance their parents, would describe children and adolescents with repressive personality styles as more distressed (anxious and depressed) than self-assured children with comparable illness.

METHOD

Subjects

Participants were selected from a study group of 91 HIV-infected children and adolescents recruited from 33 Hemophilia Treatment Centers in a wide range of geographic regions. A comparison group that included 92 children and adolescents with hemophilia who were HIV negative with comparable disease-related and demographic characteristics such as hemophilia severity, age, race, social class, and life changes was also recruited. Selection criteria were as follows: (a) diagnosis of HIV infection based on the detection of viral antibodies in blood using the enzyme-linked immunoabsorbent assay (ELISA). The Western Blot test was used to rule out false positive ELISA findings and to establish the antibody’s presence; (b) no clinical evidence of AIDS, ARC, or AIDS dementia (Centers for Disease Control & Prevention, 1987); (c) ages 8 to 17 years; (d) sufficient level of cognitive development to allow for valid completion of measures; (e) presence of family caregiver respondent (e.g., child’s mother) who was sufficiently familiar with the child’s adjustment to complete the measures in a valid manner; and
(f) moderate and severe hemophilia. Moderate severity was defined as rare spontaneous hemorrhages; significant hemorrhage only after minor trauma; and circulation level of Factor VIII (AHF) ranging from 2–5% of normal. Severe hemophilia was defined as spontaneous hemorrhages into soft tissues, joints, and muscles; bleeding after any type of trauma or minor surgery; and circulating level of Factor VIII that was 0–1% of normal (Jones & Ratnoff, 1991).

Patients with mild hemophilia were not included because it is rare for such patients to be HIV positive because they have limited or no exposure to blood concentrates in their treatment. To clarify the specific psychological impact of HIV positivity, children and adolescents with AIDS were also excluded. AIDS-related diseases produce unique stressors and multiple physical symptoms, including changes in the central nervous system function, that would be expected to influence their psychological adaptation (Belfer, Kremmer, & Miller, 1988). Mothers of children and adolescents with hemophilia were selected to be primary respondents because they are the child's major caretaker in most families, and hence would be expected to be most knowledgeable about their child's adjustment.

Data Collection Procedures

A total of 125 patients in each group, 250 in all, met the study criteria. Of those who met the criteria, 30 from the HIV-positive group and 20 from the HIV-negative group refused to participate. The majority of these nonparticipants reported that they did not have sufficient time to participate. Another 3 HIV-positive and 3 HIV-negative patients could not be contacted despite continued efforts of the center staff. Data collection was accomplished in a similar manner at each center by staff who attended a training session. Measures were administered separately to mother and child to facilitate independent responses. Questions were read to those subjects who did not have sufficient reading level to complete the tests. Following data collection, all measures were sent to a central site for scoring and analyses.

Classification of Repressor and Self-Assured Subgroups

The Weinberger Adjustment Inventory (WAI; Weinberger, 1991, 1994) was used to categorize children in the above sample into a repressor or self-assured group. Based on a typological approach to personality assessment developed by Weinberger and Schwartz (1990), the WAI is an 84-item self-report inventory suitable for children and adolescents that defines emotional adjustment in terms of two major dimensions: (a) Distress, which includes Low Self-esteem, Low Well-being, Anxiety, and Depression; and (b) Self-Restraint, which includes
Impulse Control, Suppression of Aggression, Consideration of Others, and Responsibility. Two defensiveness scales: Denial of Distress and Repressive Defensiveness are also included. In addition to the use of the scales in correlational analysis, a typology of adjustment styles, crossing Distress (high/low) with Restraint (high/moderate/low) has been developed (Weinberger & Schwartz, 1990). This typology includes a nondefensive or self-assured group (low distress and moderate restraint) and a highly defensive or “repressive” group (low distress and high restraint) (Weinberger & Davidson, 1994). Sample items that characterize repressive defensiveness include: I’m never unkind to people I don’t like (true); once in a while, I break a promise I’ve made (false).

Adequate internal consistency (Cronbach’s alphas) for the general dimensions and subscales has been established for child and adolescent samples (Weinberger, 1994). In the present study, internal consistency (Cronbach’s alphas) was .79 for Distress, .80 for Restraint, and .78 for Repressive Defensiveness. Scales of the WAI have been validated based on confirmatory factor analyses, and convergent and discriminant validity studies in clinical and nonclinical populations using children’s, teachers’, peers’, and parents’ reports (Feldman & Weinberger, 1994; Feldman, Wentzel, Weinberger, & Munson, 1990; Weinberger, 1991, 1994; Weinberger, Tublin, Feldman, & Ford, 1990).

Children were classified into a defensive or repressive group (low distress-high restraint) versus self-assured group (low distress-high restraint) based on an equally weighted composite of Restraint (30 items) and Repressive Defensiveness (11 items) (Weinberger & Davidson, 1994). Based on recommended procedures (Weinberger, 1991), if a child or adolescent scored less than 72 on the Distress subscale, greater than 105 on the Restraint subscale, and greater than 68 on the Repressive Defensiveness composite, he was placed in the repressive subgroup (n = 26). A child meeting the same criteria for Distress and Restraint, but scoring less than 68 on the Repressive Defensiveness composite, was categorized as self-assured (n = 34). These two groups were then compared on the following measures of psychological distress.

**Measurement of Psychological Distress**

Psychological distress including anxiety and depression was assessed by child and parent report. Children’s self-reports of anxiety were assessed by the State-Trait Anxiety Inventory for Children (STAIC), a self-report measure that has been shown to have adequate psychometric characteristics and has been widely used with children and adolescents (Spielberger, Edwards, & Luchene, 1989). Measures of internal consistency (Cronbach’s alphas) were .84 for State Anxiety and .76 for Trait Anxiety. Children’s self-reports of depressed mood were measured by the WAI (see previous description). Internal consistency (Cronbach’s alpha) for this scale was .79.
Mothers' reports of their children's psychological distress were assessed by the Anxiety/Depression (6 items) subscale of the Personality Adjustment and Role Skill Scale (PARS III; Walker, Stein, Perrin, & Jessop, 1990). This 28-item instrument taps domains of psychological adjustment that are particularly relevant for children with a chronic illness but does not contain items concerning physical symptoms that are a potential source of bias (Perrin et al., 1991). The instrument has sound psychometric properties that have been established in several studies of chronically ill children (Walker et al., 1990). Internal consistency (Cronbach's alpha) for the Anxiety/Depression subscale of the PARS III was .77. It should be noted that lower scores on this measure reflect more problematic adjustment.

Additional Descriptive Measures

Stressful Life Events. The frequency of stressful life events that was experienced by families in the sample during the past year as reported by mothers on the Life Events Questionnaire, which assesses a wide range of possible events (Garmezy, Masten, & Tellegen, 1984).

Maternal Psychological Distress. Maternal psychological distress was assessed by the Profile of Mood States Scale (POMS), a 65-item scale that has been widely used in clinical and experimental research and has well-documented reliability and validity (McNair, Lorr, & Droppleman, 1992).

RESULTS

The first step in the analysis was to classify children in the entire sample in the repressor versus self-assured subgroups. Within the HIV-positive group (n = 91), 14 children were classified as repressors and 15 as self-assured. Within the HIV-negative sample (n = 92), 12 children were classified as repressors and 19 as self-assured. These comparable frequencies ($\chi^2 = ns$), together with an absence of group differences in psychological adjustment based on most self-report measures found in a prior study (Drotar et al., 1995), provided justification for combining children with HIV-positive and HIV-negative status into one group for the purpose of the present analysis.

Illness characteristics and family demographic characteristics of the repressor (n = 26) and self-assured (n = 34) groups including age, education, social class (Hollingshead, 1965), marital status, frequency of life changes, level of maternal distress, and total score on the POMS are shown in Table I. The two groups were comparable in relevant illness characteristics such as severity of hemophilia and the percentages of children and adolescents who were HIV posi-
Repressive Personality Style

Table 1. Descriptive Characteristics of Study Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Repressor (n = 26)</th>
<th>Self-assured (n = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Child age (years)</td>
<td>14.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Maternal age (years)</td>
<td>38.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Social class</td>
<td>3.5</td>
<td>1.0</td>
</tr>
<tr>
<td>POMS</td>
<td>188.5</td>
<td>31.8</td>
</tr>
<tr>
<td>Life events</td>
<td>8.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>17</td>
<td>65.4</td>
</tr>
<tr>
<td>African American</td>
<td>6</td>
<td>23.1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td>Hemophilia severity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>5</td>
<td>19.2</td>
</tr>
<tr>
<td>Severe</td>
<td>21</td>
<td>80.8</td>
</tr>
<tr>
<td>HIV status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>12</td>
<td>46.2</td>
</tr>
<tr>
<td>Negative</td>
<td>14</td>
<td>53.8</td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
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<tr>
<td>Married</td>
<td>18</td>
<td>69.3</td>
</tr>
<tr>
<td>Not married</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Divorced or separated</td>
<td>5</td>
<td>19.3</td>
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<tr>
<td>Never married</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Maternal education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;12</td>
<td>4</td>
<td>15.4</td>
</tr>
<tr>
<td>12–16</td>
<td>22</td>
<td>84.6</td>
</tr>
<tr>
<td>16+</td>
<td>4</td>
<td>11.8</td>
</tr>
</tbody>
</table>

As hypothesized, the repressed and self-assured groups did not differ in State Anxiety (M = 27.3, SD = 4.5) versus (M = 28.5, SD = 4.6), F(5, 54) = 1.14, ns, or Trait Anxiety (M = 29.9, SD = 5.3) versus (M = 30.9, SD = 5.5), F(5, 54) = 0.56, ns. Moreover, children and adolescents with repressive personality styles reported lower Depression scores (M = 13.2, SD = 3.1) than the self-assured group (M = 14.7, SD = 4.1), F(5, 54) = 5.51, p < .01.

On the other hand, and also consistent with predictions, mothers of children...
and adolescents who were classified as repressors reported that their children had lower Anxiety/Depression scale scores on the PARS ($M = 20.3$, $SD = 3.13$), reflecting more problematic adjustment, than mothers of children and adolescents who were classified as self-assured ($M = 22.1$, $SD = 1.7$), $F(5, 54) = 2.44$, $p < .05$.

**DISCUSSION**

The present study extends previous findings by clarifying the impact of the repressive personality style on the measurement of psychological distress in a sample of children and adolescents with a chronic health condition, in this case, hemophilia. Highly defensive children and adolescents with hemophilia reported lower levels of depression and similar levels of anxiety to that of nondefensive, nondistressed children and adolescents with the same illness. On the other hand, and also as predicted, highly defensive children and adolescents with hemophilia were described by their mothers as more anxious and depressed than their counterparts with a nondistressed, nondefensive pattern of personality adjustment.

The most salient implication of these findings is that investigators who assess self-reports of psychological distress (anxiety or depression) among children with chronic health conditions (as well as in other child populations) should consider the potential impact of the repressive personality style on their findings. Self-reports provide a particularly misleading characterization of psychological distress among children with repressive personality styles who consistently underestimate their level of distress. Although many children are more accurate informants about their own psychological distress and internalizing symptoms than their parents (Lachar & Gruber, 1993), repressors' strong personal motivation to report low levels of subjective psychological distress distorts their appraisals of problems, especially of internalizing symptoms. For this reason, more valid and informative results from children with repressive personality styles will be obtained if data from other informants (e.g., parent, teachers, or peers) are also included, rather than relying exclusively on self-reports (Weinberger, in press). Of course, in some situations the accuracy of parents' appraisals of their children's psychological symptoms can also be affected by factors such as the level of distress, which should be considered (Canning, Hanser, Shade, & Boyce, 1993).

Several issues that may affect the interpretation of our results should be mentioned. First, because it was not possible to obtain data from peers or teachers in the context of this multicenter study, mothers were the only informants other than the children. Our findings would have been strengthened by inclusion of data from other informants, such as teachers or peers. However, the validity of the repressive-defensive style in predicting psychological distress based on re-
ports from multiple informants (e.g., parents, teachers, and peers) has been reported elsewhere (Tublin, Bartholomew, Weinberger, Feldman, & Ford, 1987; Weinberger, 1991).

Another issue is that there are several available methods of identifying children with a repressive personality style, for example, by measures of social desirability (Crandall, Crandall, & Katovsky, 1965; Crowne & Marlowe, 1960), and/or personality adjustment such as the WAI. Although these methods are relatively compatible, they could yield somewhat different findings (Fritz et al., 1994). However, the validity of using the WAI to identify individuals with repressive personality style has been established (Berkoff & Drotar, 1994; Weinberger & Davidson, 1994).

One important but unanswered question is the clinical significance of the statistically significant but small absolute differences obtained here. At a group level, these differences probably do not have much clinical significance. However, at an individual level, some highly repressed, defensive children demonstrate highly distorted perceptions of their own psychological status that can differ substantially from how others (e.g., parents, teachers, and peers) perceive them and hence should be considered in clinical assessment (Weinberger, in press). In research, the presence of such extreme cases also can have dramatic effects on the obtained associations between self and others' reports of symptoms and hence on analyses of validity coefficients (Weinberger, in press).

The present study was undertaken to illustrate the impact of the repressive personality style in one sample of children with hemophilia, including those with HIV infection. Research suggests that one might expect comparable effects on the measurement of psychological distress in various chronic illness populations or in most populations of physically healthy children, for that matter (Weinberger, 1990). On the other hand, increased defensiveness and/or repression has been described among children with cancer (Canning et al., 1992) for reasons that are not entirely clear, but which might relate to the child's response to cancer and concomitant treatment (Phipps, Fairclough, & Mulhern, 1995). Thus, the assessment of repressive personality style may be particularly critical for children with cancer. However, additional research is clearly indicated to define the prevalence and impact of repressive personality style on the psychological and clinical morbidity of children with various chronic health conditions.

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