

Ego Control, Ego Resiliency, and the Five-Factor Model as Predictors of Behavioral and Emotional Problems in Clinic-Referred Children and Adolescents

Stanley J. Huey, Jr., and John R. Weisz
University of California, Los Angeles

The relations of Ego control (EC), Ego resiliency (ER), and the Five-Factor Model of Personality (FFM) with behavioral and emotional problems were explored among 116 clinic-referred children. Within the EC–ER model, Ego undercontrol was most important in predicting externalizing problems, and both Ego brittleness (the relative absence of ER) and Ego undercontrol made equal contributions to predicting internalizing problems. Within the FFM, Extraversion and Agreeableness were independent predictors of externalizing problems, whereas only Neuroticism predicted internalizing problems. When the EC–ER model was tested against the FFM, the latter model appeared to outperform the former in predicting externalizing but not internalizing problems; when clinical syndrome groups were examined, dimensions from both personality models were differentially salient for children with primary internalizing, externalizing, or comorbid problems.

A growing body of work has emerged linking personality attributes to patterns of psychopathology in children (e.g., Allsopp & Feldman, 1976; Eysenck, 1981; Furnham & Thompson, 1991; John, Caspi, Robins, Moffitt, & Stouthamer-Loeber, 1994; Lane, 1987; Moffitt, 1993). However, two prominent models of personality with hypothesized relations to behavioral and emotional problems in children, the Ego-control–Ego-resiliency model (J. H. Block & Block, 1980) and the Five-Factor Model of Personality (FFM; Robins, John, & Caspi, 1994), have received little attention from clinical researchers and have rarely been studied in clinical samples. Considering the nominal and conceptual similarities between these personality dimensions and conventional domains of child psychopathology (see below), this seems to be a significant oversight.

Ego-Control/Ego-Resiliency Model

The constructs of Ego control and Ego resiliency derive from efforts to conceptualize the otherwise vague notion of the *ego*,

invoked as modulating the desires of the individual to adapt to external restrictions and constraints (J. Block, 1950; J. H. Block, 1951; J. Block & Kremen, 1996; J. H. Block, 1951; J. H. Block & Block, 1980). Whereas Ego control refers to the degree to which individuals express their impulses, Ego resiliency describes the internal personality structures that function to modulate these impulses adaptively (J. H. Block & Kremen, 1996; J. H. Block & Block, 1980). At one end of the Ego-control continuum lie *Ego-undercontrolled* individuals, described as spontaneous, emotionally expressive, and focused on the immediate gratification of desires. At the other extreme are *Ego-overcontrolled* individuals, who are relatively constrained and inhibited and who tend toward minimal expression of their impulses and emotions. Research suggests that children described as Ego undercontrolled tend to exhibit patterns of delinquent behavior (White et al., 1994), demonstrate deficits in delayed gratification (Funder & Block, 1989; Funder, Block, & Block, 1983), and engage in frequent hard drug use in adolescence (J. Block, Block, & Keyes, 1988; Shedler & Block, 1990). However, others report that Ego-undercontrolled boys tend to be judged as socially competent by objective observers (Vaughn & Martino, 1988; Waters, Garber, Gornal, & Vaughn, 1983). Ego overcontrol, at the opposite end of the spectrum, is associated with depressive symptoms in adolescence (J. Block & Gjerde, 1990).

At the high end of the Ego-resiliency continuum lies the *Ego-resilient* individual who is resourceful in adapting to novel situations; at the opposite end is the *Ego-brittle* individual who exhibits little adaptive flexibility when encountering novel or stressful situations (J. H. Block & Block, 1980). Research has linked childhood Ego resiliency to secure attachment in infancy (Arend, Gove, & Sroufe, 1979), empathic behavior of children toward peers (Strayer & Roberts, 1989), preschool problem-solving ability (Arend, Gove, & Sroufe, 1979), and delay of gratification behavior in young children and adolescents (Funder & Block, 1989; Mischel, Shoda, & Peake, 1988). Other

Stanley J. Huey, Jr., and John R. Weisz, Psychology Department, University of California, Los Angeles.

The research reported in this article was completed in partial fulfillment of a master's degree in psychology by Stanley J. Huey, Jr. The research project was supported by National Institute of Mental Health (NIMH) Research Grant R01 MH 49522 and by Research Scientist Award K05 MH01161 from NIMH. We thank Jack Block for his insightful comments and for making available to us the criterion Q-sort for ego undercontrol and ego resiliency. We also thank Douglas Granger for his assistance in organizing and analyzing these data and Tom Wickens for statistical assistance. Finally, we would like to thank the reviewers of the original manuscript for encouraging us to incorporate the Five-Factor model.

Correspondence concerning this article should be addressed to Stanley J. Huey, Jr., Psychology Department, 1282A Franz Hall, University of California, Box 951563 Los Angeles, California 90095-1563. Electronic mail may be sent via Internet to shuey@ucla.edu.

studies have linked Ego brittleness to hard drug use (J. Block et al., 1988) and depressive symptoms in adolescence (J. Block & Gjerde, 1990, J. Block, Gjerde, & Block, 1991).

A notably distinct but related area of research has dealt with the classification of psychopathology in children and adolescents. Of particular interest here is the work of Achenbach and colleagues (e.g., Achenbach & Edelbrock, 1991) whose principal components analyses of the Child Behavior Checklist (CBCL) point to two broad-band factors, each encompassing multiple narrow-band syndromes. An *externalizing* factor includes aggression, hyperactivity, and related problems of acting out, whereas an *internalizing* factor includes such problems as anxiety, depression, and social withdrawal. A nominal overlap between Ego control and the broadband behavior dimensions is apparent in the use of the terms *undercontrol* and *overcontrol* by some researchers to describe externalizing and internalizing behavior problems, respectively (e.g., Achenbach & Edelbrock, 1978; Achenbach, McConaughy, & Howell, 1987; Granger, Stansbury, & Henker, 1994; Kendall & Sessa, 1993; Lambert, Weisz, Knight, & Desrosiers, 1992; Weisz et al., 1988; Weisz, Weiss, Alicka, & Klotz, 1987). Although opinions differ (e.g., J. Block, Gjerde, & Block, 1991), a conceptual overlap between Ego control and psychopathology may exist as well. For example, behaviors such as aggression, distractibility, and hyperactivity that load on the externalizing syndrome might be seen as reflecting the impulsive style and self-control deficits posited to underlie Ego undercontrol. Similarly, the depression, anxiety, and shyness that load on the internalizing syndrome could conceivably reflect the Ego overcontroller's hypothesized overcontainment of impulse.

The results of one study (Wolfson, Fields, & Rose, 1987) provide some empirical support for this apparent overlap by revealing a positive association between Ego undercontrol and externalizing problems in preschool children. However, Wolfson et al. also discovered that, contrary to the prediction of an overlap hypothesis, Ego undercontrol showed a near-significant positive correlation with internalizing problems. The design of the present study differs substantially from that of Wolfson et al. in ways that may permit a somewhat more comprehensive test of these personality-psychopathology relationships. First, compared with the Wolfson et al. sample, the children in the current study were substantially older, and they spanned a broader age range; this made it possible to test for relations that might not have been evident as early as the preschool years. Second, children with a primary diagnosis of conduct disorder or attention deficit disorder were excluded from the Wolfson et al. study, and this may have restricted the sample in ways that limited detection of certain personality-psychopathology relations. The present study included clinic-referred children with a broad array of problems and diagnoses, with minimal exclusionary criteria applied. Third, the relatively small sample of 27 clinic children in the Wolfson et al. study may not have provided sufficient power to detect the relationships of interest in the present study. A maximally sensitive test of whether the Ego-control and Ego-resiliency dimensions are linked to child problems may well require a fairly large clinical sample, one in which levels of both internalizing and externalizing problems are high enough to generate substantial variability along both dimensions. In the present study we used such a sample (i.e.,

116 children, 7-17 years of age), demonstrating such substantial levels of problem behavior that they had been referred to mental health clinics for treatment. Of particular interest were three questions derived from previous research: (a) Is Ego undercontrol associated with externalizing problems? (b) Is Ego overcontrol associated with internalizing problems? and (c) Does Ego brittleness exacerbate children's susceptibility to either internalizing or externalizing problems?

FFM

The FFM has achieved appreciable attention in the personality literature as a unifying model for personality structure (John, 1990; McCrae & John, 1992), although there are ongoing debates surrounding the conceptual and methodological underpinnings of this framework (see J. Block, 1995a, 1995b; Costa & McCrae, 1995; Goldberg & Saucier, 1995). The FFM encompasses five theoretically distinct dimensions that include extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. *Extraversion* refers to an individual's outer-directed interpersonal behavior and describes those who are generally active, energetic, and sociable. *Agreeableness* describes a quality of interaction preference ranging from compassion to antagonism. *Conscientiousness* assesses task and goal-directed behavior, persistence, organization, and socially prescribed impulse control. *Neuroticism* describes a chronic level of poor emotional adjustment and contrasts individuals with high levels of hostility, anxiety, depression, and vulnerability to those who are emotionally stable. Finally, *openness to experience* involves the active seeking and appreciation of life experiences. (For a more extensive description of these dimensions, see Costa & Widiger, 1994).

Evidence supporting the existence of these five factors in children has emerged in studies that sampled culturally diverse children and used various assessment strategies including Q-sort methodology, trait adjective checklists, and free descriptions of child personality (Digman, 1989; Digman & Inouye, 1986; Digman & Takemoto-Chock, 1981; John et al., 1994; Kohnstamm, Halverson, Havill, & Mervielde, 1996). Although the literature on FFM correlates in children is thin, researchers have found associations between several FFM variables and child measures of school performance, intelligence (John et al., 1994), self-esteem, and classroom adjustment (Graziano & Ward, 1992).

The FFM has been applied repeatedly to studies of psychopathology in adults (Fagan et al., 1991; Trull & Sher, 1994; Widiger & Trull, 1992), although few studies to date have explored its utility in explaining psychopathology in children (John et al., 1994; Robins et al., 1994). John et al. noted that the symptoms common among externalizing children (see above) imply a pattern of low Agreeableness and low Conscientiousness, whereas symptoms of internalizing children appear to reflect high levels of Neuroticism and low levels of Extraversion. In fact, they found not only that these hypotheses were supported in their longitudinal sample of Pittsburgh youth, but also that nearly all of the FFM domains (except Neuroticism) differentiated delinquent from nondelinquent boys. However, John et al. focused only on 12- and 13-year-old boys and relied solely on teachers as reporters of child psychopathology. The present study

provided a partial replication of the John et al. study with a sample of clinic-referred children, diverse in terms of age, ethnicity, gender, and reason for referral. Using multiple raters, we explored the relations between the FFM dimensions and behavior problems in children.

Competing Personality Models

In a rare attempt to compare domains across personality models in a sample of youths, Robins et al. (1994) found that Ego undercontrol was correlated with Extraversion, Conscientiousness, and Agreeableness, and Ego resiliency was associated with the well-adjusted poles of all FFM dimensions. On the basis of this work, we expected the FFM and Ego control–Ego resiliency models to overlap considerably in their ability to predict problems in our sample of youth, although we were uncertain whether one model would predict outcomes above and beyond the alternative model. To explore this possibility, we compared the explanatory power of the Ego control–Ego resiliency model to that of the FFM in predicting psychopathology in children and in discriminating clinical syndrome groups from one another.

We used standard measures of child problems (Achenbach & Edelbrock, 1986) and of Ego control and Ego resiliency (J. H. Block & Block, 1980). In assessing the FFM dimensions, we followed procedures outlined by John et al. (1994). To limit the impact of parents' and children's clinic contact on these measures, we relied on teachers as our primary informants, although we included parent and youth ratings of behavior problems in several analyses as well.

Method

The present study was part of a larger, longitudinal study involving a sample of outpatient, mental health clinic-referred children. Participating families were recruited from community-based clinics in central and southern California following an initial clinic intake assessment. Children were excluded if they showed evidence of mental retardation or psychosis or if their clinic contact was police ordered or court mandated. Otherwise, participant selection was based on successive clinic referrals rather than diagnostic status, so that a wide range of behavioral and emotional disturbances characterized participating children.

Sampling Strategy and Resulting Sample

Given the potential impact of parents' and children's clinic contact on their responses to the measures in this study, it seemed wise to rely on informants who had regular, recurring opportunities to observe the children but had not been involved in the child's interactions with clinic staff. This reasoning led us to rely on teachers as primary informants. Unfortunately, teacher data could not be obtained for many of the children because our point of contact (after clinic intake but prior to therapy) sometimes fell during school vacations or too early in the academic year for teachers to accurately assess the children (we required at least 2 months of teacher contact with the child prior to our measures). For some of the remaining teachers, we could not obtain parental consent to participate, teachers refused to participate, or the data were incomplete. Thus, from the full longitudinal sample of 270, we obtained complete teacher data for 116 children. These 116 included 76 boys and 40 girls ranging in age from 7 to 17 years, and with a median age of 11. Fifty-two percent were Caucasian, 17% African American, 14% Latino, 2% Asian, and the remainder (15%) of mixed or other ethnicity. Approximately 82% of participating mothers had completed at least 1 year of

college. Forty-one percent of families reported incomes below \$15,000 per year and 91% had incomes below \$60,000.

We assessed whether the 116 for whom we had complete teacher reports differed demographically from the remainder of the sample and found no significant differences on any of the key demographic and clinical variables we used for comparison (i.e., sex, ethnicity, age, parent education, family income, vocabulary scores on the Wechsler Intelligence Scale for Children [WISC-R; Wechsler, 1974], CBCL scores [externalizing, internalizing, total problems], or Youth Self Report [YSR] scores [externalizing, internalizing, total problems]).

Measures

California Child Q-Set. For each participant, a teacher familiar with the child in an academic setting provided assessments of Ego control, Ego resiliency, and the FFM dimensions vis-à-vis the Common Language Version of the California Child Q-Set (CCQ), a language-simplified personality inventory for use by nonprofessionals (Caspi et al., 1992). Adapted from the adult-focused California Q-Set (J. Block 1978), the CCQ consists of 100 personality-relevant cards administered in a Q-sort fashion with 11 descriptive cards placed within a forced choice, 9-category, rectangular distribution. The rater describes an individual by placing each card in one of the 9 categories ranging from 1 (*least descriptive*) to 9 (*most descriptive*). The CCQ permits rater evaluation of a wide range of personality, social, and behavioral dimensions in children (Arend et al., 1979; Asendorpf & van Aken, 1991; J. H. Block & Block, 1980; Dollinger, 1992; Waters, Wippman, & Sroufe, 1979).

Scoring of the Ego control–Ego resiliency dimensions. To obtain Ego control and Ego resiliency prototypes, three psychologists independently used the CCQ to describe a hypothetical Ego-undercontrolled child and again to describe a hypothetical Ego-resilient child (J. H. Block & Block, 1980). The individual prototypes were then constructed by averaging the experts' ratings of each item. In determining the personality profile for any one individual, that individual's sorted Q-set is correlated with the prototype (of Ego control or Ego resiliency) to obtain a congruence score. By convention, positive congruence scores indicate the degree of Ego undercontrol observed in the child whereas negative scores reflect the degree of Ego overcontrol. For example, a high positive correlation between the child's CCQ description by a rater and the Ego control criterion definition signifies that the child is very Ego undercontrolled, whereas a high negative correlation signifies that the child is very Ego overcontrolled (J. H. Block & Block, 1980). Similarly, a positive congruence score along the Ego-resiliency axis would indicate Ego resilience, whereas negative scores indicate Ego brittleness (J. H. Block & Block, 1980). The validity (Arend et al., 1979; J. H. Block & Block, 1980; Klohnen, 1996; Waters et al., 1979) and reliability (J. H. Block & Block, 1980; Caspi et al., 1992) of these dimensions are supported by previous research.

Sample items describing a prototypical Ego-undercontrolled child include "when he wants something, he wants it right away" and "he is fast-paced; he moves and reacts to things quickly." Items describing an Ego-overcontrolled child include "he is careful not to get hurt (physically)" and "he is determined in what he does; he does not give up easily." Prototypical Ego-resilient descriptions include "he can bounce back or recover after a stressful experience" and "he finds ways to make things happen and get things done," whereas prototypical Ego-brittle statements include "he tends to go to pieces under stress" and "his emotions don't seem to fit the situation."

Scoring of the FFM dimensions. The FFM scales were also derived from the CCQ. Following John et al. (1994), 9 CCQ items were combined to form the Extraversion Scale (e.g., "He is energetic and full of life"), 13 to form the Agreeableness Scale (e.g., "He gets along well with other people"), 9 for the Conscientiousness Scale (e.g., "He finds ways to make things happen and get things done"), 10 for the Neuroti-

cism Scale (e.g., "He is nervous and fearful"), and 7 for the Openness Scale (e.g., "He is curious and exploring; he likes to learn and experience new things"). False-keyed items were reverse scored, and appropriate Q-sort items averaged for each scale. The validity and reliability of the CCQ-based FFM scales are adequate (John et al., 1994; Robins et al., 1994). The internal consistency for each scale in the present sample was as follows: Extraversion ($\alpha = .67$), Agreeableness ($\alpha = .90$), Conscientiousness ($\alpha = .76$), Neuroticism ($\alpha = .82$), Openness ($\alpha = .67$).

Teacher's Report Form. Using the Teacher's Report Form of the Child Behavior Checklist (TRF; Achenbach & Edelbrock, 1986), teachers reported child behavior problems over the most recent 2-month period. The TRF consists of 118 specific child problem behaviors rated on a 0–1–2 scale from *not true* to *very true* or *often true*. Sample items include "fails to carry out assigned tasks" and "disrupts class discipline" (Achenbach & Edelbrock, 1986; McConaughy, Achenbach, & Gent, 1988). Parallel forms of this checklist were completed by parents and by the youths themselves (see below).

CBCL. Parents reported on child behavior problems with the CBCL (Achenbach, 1991). Like the TRF, the CBCL consists of 118 child problem behaviors rated on a 0–1–2 scale from *not true* to *very true* or *often true*. Of the 118 items, 93 are similar to those found on the TRF. The remaining items, such as "steals at home," "is disobedient at home," and "wets the bed," are specific to home and replace TRF items that are considered inappropriate for rating by teachers (Achenbach, 1991).

YSR. Using the YSR (Achenbach & Edelbrock, 1987), children made ratings of their own behavior problems during the interview assessment. The YSR consists of 102 problem items endorsed by the child on a 0–1–2 scale from *not true* to *very true* or *often true*. Eighty-nine of these items are similar to those found on the CBCL and TRF, with the remaining items, such as "I can be pretty friendly," "I stand up for my rights," and "I enjoy a good joke," being unique to the YSR.

The TRF, CBCL, and YSR each generate standardized scores that reflect total behavior problems as well as the two broad-band scales of externalizing (e.g., fights, argues, disobeys) and internalizing (e.g., sad, anxious, shy) problems. Rather than reporting raw scores, we used *T* scores, which reflect each child's standing relative to youngsters of similar age and gender in a representative national sample. Evidence regarding the validity and reliability of the TRF, CBCL, and YSR is abundant (see Achenbach & Edelbrock, 1986, 1987, 1991).

Procedure

Once given written consent from parents, project staff contacted (by telephone) an academic teacher of the student assessed in this study. For those teachers who agreed, an interview was arranged in which the TRF and the CCQ were completed by the teacher in the school setting. Instructions were read to the teacher who then completed the questionnaire and the CCQ with the interviewer present. Completion time for the two measures was approximately 1 hr. The parent and child were interviewed, separately, for approximately 2½ hr. The CBCL was completed by parents and the YSR was completed by the youths within the first hour of the interview session. Interviewers read each YSR item to the child who then gave a response indicating how true the item was for him or her.

Results

Table 1 displays the means and standard deviations of the key variables for the full sample and for boys and girls separately. Table 2 displays the correlation matrix for these variables in the full sample. Male sex was associated with higher Ego-undercontrol ratings and lower Agreeableness ratings. Sex was not sig-

nificantly associated with other dimensions of personality. Teachers rated boys higher than girls in externalizing problems, although there were no sex differences in internalizing problem behaviors. Age was not correlated with any of the personality dimensions or with externalizing problems. However, age was negatively correlated with teacher-rated internalizing problems, indicating that the prevalence of internalizing problems tends to decrease with age.

Behavior Problem Dimensions as Correlates of Personality

Results from Table 2 indicate that Ego resiliency was negatively correlated with TRF-based internalizing and externalizing problems. In general, as Ego resiliency increased, behavior problems of both types decreased. By contrast, internalizing and externalizing problems differed substantially in their relationships with Ego undercontrol. Ego undercontrol was positively correlated with teacher-rated externalizing problems, but negatively associated with internalizing problems.

Similarly, most of the FFM correlates of TRF-rated problems were significant and in the expected directions (Table 2). Externalizing problems were inversely correlated with both Agreeableness and Conscientiousness, but positively correlated with Extraversion. Internalizing problems were negatively correlated with Extraversion, but positively associated with Neuroticism.

Correlation magnitudes dropped sharply when we explored associations between personality and psychopathology from additional reporters. Although Ego undercontrol and Agreeableness retained their significant or near significant correlations with externalizing problems across raters, generally, personality correlates with parent and youth ratings of behavior problems were consistently smaller than teacher-based ratings (Table 2). This attenuation in correlation magnitudes was not unexpected and reflects, in part, the common problem of low agreement across multiple informants (Achenbach et al., 1987; Loeber, Green, Lahey, & Stouthamer-Loeber, 1989). In fact, the low correlations between teacher and parent reports in this study ($r = .34$ for externalizing problems, $r = .22$ for internalizing problems) are remarkably similar to the those reported in a meta-analysis by Achenbach et al. (1987; $r = .32$, and $r = .21$, for cross-informant ratings of externalizing and internalizing problems, respectively).

Ego resiliency was positively associated with each FFM factor except Neuroticism, for which there was a large and significant negative correlation. Ego undercontrol was negatively associated with Agreeableness, Conscientiousness, and Neuroticism, but positively associated with Extraversion (Table 2).

Dealing With Item Overlap

Careful scrutiny of the CCQ and TRF revealed substantial overlap in the item content of both measures. Because item overlap may inflate correlations between personality and psychopathology, the following procedure was implemented to ensure that this overlap would not compromise important theoretical and empirical links of interest to us. Each author independently reviewed the two measures and selected CCQ items which, at face value, appeared to overlap one or more TRF

Table 1
Means and Standard Deviations for Personality and Behavior Problem Variables

Variable	Total (N = 116)		Boys (n = 76)		Girls (n = 40)	
	M	SD	M	SD	M	SD
Ego undercontrol	0.04	0.29	0.09	0.28	-.05	.29
Ego resiliency	0.01	0.32	0.00	0.31	.02	.36
Extraversion	5.02	1.80	5.13	1.76	4.81	1.89
Agreeableness	5.29	1.69	5.01	1.66	5.83	1.65
Conscientiousness	4.44	1.35	4.35	1.36	4.63	1.34
Neuroticism	5.36	1.47	5.28	1.48	5.50	1.45
Openness	5.24	1.40	5.40	1.33	4.93	1.49
TRF externalizing T score	62.27	10.44	63.76	9.55	59.43	11.53
TRF internalizing T score	63.22	10.23	63.99	10.43	61.75	9.81
CBCL externalizing T score	65.67	11.44	67.08	10.40	62.92	12.94
CBCL internalizing T score	65.52	10.89	65.93	11.55	64.72	9.57
YSR externalizing T score	58.67	11.64	59.15	11.56	57.74	11.89
YSR internalizing T score	58.77	12.21	59.31	13.41	57.74	9.57
Age (in years)	11.11	2.61	10.72	2.56	11.85	2.56

Note. TRF = Teacher's Report Form; CBCL = Child Behavior Checklist; YSR = Youth Self-Report.

items (for example, the statement "worries about things for a long time" from the CCQ overlaps with the item "worries" from the TRF). When the authors agreed in their determination of overlap ($\kappa = .90$), those items were removed from the CCQ. When disagreement occurred, the authors discussed discrepancies and conjointly agreed on the elimination of additional items. In total, 18 items were removed from the CCQ by this procedure, so that the 82 remaining items were considered conceptually distinct from those found on the TRF.¹

Each personality scale was then recalculated on the basis of this reduced-item CCQ. Ego control and Ego resiliency scores based on the reduced-item CCQ were found to be highly intercorrelated with their original CCQ counterparts ($r = .99, p < .001$, for both pairs of variables). To test whether removal of the 18 items affected associations with other variables in this study, all correlations were reanalyzed with the reduced scales, and differences between the new and original correlations were calculated. Results indicated that item overlap did not significantly alter the magnitude or direction of correlations. For example, the correlation between Ego control (original) and internalizing problems (TRF) was $r = -.24, p < .05$, whereas the correlation between Ego control (reduced item) and internalizing problems was $r = -.22, p < .05$. The difference between these correlations was not significant, $z = .16, ns$. This pattern of nonsignificant differences was consistent across all analyses.

The issue of item overlap with regard to the FFM scales was potentially more problematic. Because the FFM scales were based on a subset of CCQ items (from 7 to 13 items, depending on the scale), removal of overlapping items resulted in substantial reductions in the interitem reliability of several scales.² Nevertheless, with overlapping items removed from the scales, the FFM pattern of correlations remained essentially unchanged.

Therefore, because item overlap did not significantly attenuate the relevant patterns of associations between personality and behavior problems, we decided to report only those results that were based on the full, 100-item CCQ.

Personality Prediction to Behavior Problems

To examine the concurrent, independent contributions of Ego resiliency and Ego control to the prediction of externalizing and internalizing problems, we conducted a series of multiple regressions. Because we were interested in the predictive value of Ego control and Ego resiliency independent of gender, sex was entered at Step 1 of each regression equation. Because we had no theoretical basis for believing that either Ego control or Ego resiliency would be a more important predictor of behavior problems than the other, we entered them simultaneously at Step 2. Tables 3 and 4 indicate that each personality variable contributes independently, but differentially, to externalizing and internalizing problems. Whereas Ego undercontrol made the stronger independent contribution in predicting externalizing problems ($z = 3.53, p < .05$), the personality variables contributed equally to the prediction of internalizing problems ($z = .56, ns$).

Similar analyses were performed with the FFM dimensions as independent variables (Tables 3 and 4). Although bivariate correlations (see Table 2) suggested that only a subset of the FFM variables would significantly predict the problem domains of interest, nevertheless, all variables were entered together to discern the independent effects of each when considering the full model. As expected, Extraversion and Agreeableness were each significant predictors of externalizing behavior, with the latter variable making the greatest independent contribution ($z = 2.47, p < .05$). With internalizing problems, Neuroticism was the only dimension to improve prediction beyond that afforded by gender.

¹ A list of these items is available upon request from Stanley J. Huey, Jr.

² Alpha coefficients for the reduced scales are as follows: extraversion ($\alpha = .46$), agreeableness ($\alpha = .88$), conscientiousness ($\alpha = .76$), neuroticism ($\alpha = .72$), openness ($\alpha = .70$).

Table 2
Correlation Matrix of Selected Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EC-ER model															
1. Ego undercontrol	-.15														
2. Ego resiliency															
Five-Factor model															
3. Extraversion	.79***	.26**													
4. Agreeableness	-.64***	-.59***	-.20*												
5. Conscientiousness	-.48***	.64***	-.15	.40***											
6. Neuroticism	-.23*	-.75***	-.39***	-.13	-.39***										
7. Openness	-.03	.47***	-.04	.08	.21*	-.28**									
Teacher ratings															
8. TRF externalizing	.60***	-.30**	.38***	-.62***	.23*	.01	-.15								
9. TRF internalizing	-.24*	-.41***	-.29**	-.06	-.06	.50***	-.17†	.27**							
Parent ratings															
10. CBCL externalizing	.34***	-.09	.13	-.33***	-.15†	-.08	.21*	.34***	-.06						
11. CBCL internalizing	-.06	-.11	-.13	-.06	.00	.16†	.12	.06	.23*	.60***					
Youth ratings															
12. YSR externalizing	.17†	-.11	.08	-.19*	-.10	-.04	.05	.26**	-.01	.48***	.16†				
13. YSR internalizing	-.05	.00	.02	.07	.08	.06	.05	.11	.22*	.09	.27**	.52***			
Demographics															
14. Sex	-.24**	.02	-.08	.23*	.10	.07	-.16	-.20*	-.10	-.17†	-.05	-.06	-.06		
15. Age	-.08	.05	-.05	.06	.07	-.12	.00	-.07	-.19*	.08	-.05	.11	-.25**	-.21*	

Note. EC-ER = Ego control-Ego resiliency; TRF = Teacher's Report Form; CBCL = Child Behavior Checklist; YSR = Youth Self-Report.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Results of Multiple Regression Analysis Predicting Externalizing Behavior Problems: Parallel EC-ER and FFM Regressions

Independent variable	β	t ratio	Adjusted R^2	F
EC-ER regression				
Sex (boy = 1, girl = 2)	-0.06	-0.79 (ns)	—	—
Ego undercontrol	0.55	7.28***	—	—
Ego resiliency	-0.22	-2.98**	0.39	25.68***
FFM regression				
Sex (boy = 1, girl = 2)	-.07	-1.01 (ns)	—	—
Extraversion	.30	3.65***	—	—
Agreeableness	-.56	-7.15***	—	—
Conscientiousness	.09	1.08 (ns)	—	—
Neuroticism	.06	0.67 (ns)	—	—
Openness	-.10	-1.36 (ns)	.44	16.25***

Note. EC-ER = Ego control-Ego resiliency; FFM = Five-Factor Model. All p values are two-tailed.
** $p < .01$. *** $p < .001$.

FFM Versus Ego Control-Ego Resiliency Model

Next, we decided to test the relative predictive power of each personality model while controlling for the other. To do this, four additional regressions were run regressing externalizing and internalizing problems on the sets of Ego control-Ego resiliency and FFM variables in a hierarchical fashion. Because regression diagnostics indicated that multicollinearity might be a concern (in part because of high intercorrelations among some of the predictor variables), no effort was made to interpret individual regression coefficients (Pedhazur, 1982). Because multicollinearity does not effect the determination and interpretation of the

Table 4
Results of Multiple Regression Analysis Predicting Internalizing Behavior Problems: Parallel EC-ER and FFM Regressions

Independent variable	β	t ratio	Adjusted R^2	F
EC-ER regression				
Sex (boy = 1, girl = 2)	-0.18	-2.17*	—	—
Ego undercontrol	-0.35	-4.21***	—	—
Ego resiliency	-0.46	-5.68***	0.27	15.22***
FFM regression				
Sex (boy = 1, girl 2)	-.17	-2.08*	—	—
Extraversion	-.09	-0.89 (ns)	—	—
Agreeableness	-.04	-0.40 (ns)	—	—
Conscientiousness	.19	1.89†	—	—
Neuroticism	.52	5.05***	—	—
Openness	-.09	-1.05 (ns)	.27	8.18***

Note. EC-ER = Ego control-Ego resiliency; FFM = Five-Factor Model. All p values are two-tailed.
† $p < .10$. * $p < .05$. *** $p < .001$.

Table 5
Results of Two Hierarchical Multiple Regression Analyses
Predicting Externalizing Behavior Problems:
Unique FFM and EC-ER Contributions

Model and step	R^2	Adjusted R^2	R^2 change	F of R^2 change
Unique FFM contribution				
1. Sex (boy = 1, girl = 2)	.04	.03	—	—
2. EC-ER model	.41	.39	.37	34.78***
3. FFM	.49	.46	.09	3.59**
Unique EC-ER contribution				
1. Sex (boy = 1, girl = 2)	.04	.03	—	—
2. FFM	.47	.44	.43	17.88***
3. EC-ER model	.49	.46	.02	2.13 (<i>ns</i>)

Note. FFM = Five-Factor Model; EC-ER = Ego control-Ego resiliency. All p values are two-tailed.
 ** $p < .01$. *** $p < .001$.

multiple regression coefficient, we focused on assessing whether the inclusion of variables from the alternative personality model significantly improved the overall goodness of fit.

With sex entered at the first step of each equation, Tables 5 and 6 show that the equations vary by criterion variable and order of entry of the predictor models. The strength of a model was determined by assessing the degree to which it accounted for additional variance in externalizing or internalizing problems, beyond that explained by the alternative model. Results suggest that the FFM may hold a substantial edge over the Ego control-Ego resiliency model in explaining externalizing problems, but that neither has an advantage in predicting internalizing problems.

Syndrome Group Distinctions

Next we set out to determine whether the personality variables could discriminate among children falling within several "syndrome" categories. Using methods similar to John et al. (1994), we divided our sample into several groups on the basis of their reported levels of externalizing and internalizing psychopathology. However, unlike John et al., we used multiple criteria to determine syndrome status and included additional Comorbid and Nonclinical categories. Children were classified as Externalizing, Internalizing, Comorbid, or Nonclinical, on the basis of their clinical-range scores (i.e., 90th percentile) on the TRF (T score ≥ 63), CBCL (T score ≥ 63), and YSR (T score ≥ 62). Externalizing children ($n = 20$) were those who scored above the externalizing clinical cutoff on at least 2 of the 3 measures, and below the internalizing cutoff on 2 of the 3. In contrast, internalizing children ($n = 24$) scored below the externalizing clinical cutoff and above the internalizing cutoff on 2 of 3 measures. Comorbid children ($n = 38$) were rated above the clinical cutoff on 2 of 3 measures for both behavior dimensions. Children who scored beneath the clinical cutoff on 2 of the 3 scales were labeled nonclinical ($n = 34$). The large number of children classified as comorbid is consistent with the moderate to large correlations that we found between externalizing and internalizing problems across raters (see Table 2), and reflects the literature showing the frequent co-occurrence of internalizing and externalizing

syndromes in children (e.g., Achenbach et al., 1987; Bird, Gould, & Staghezza, 1993). Using one-way analyses of variances (ANOVAs), we tested for demographic and problem score differences among the syndrome groups. As expected, the comorbid and externalizing groups displayed higher levels of teacher-rated externalizing problems than the other two groups, but were not significantly different from each other. Also as predicted, the comorbid and internalizing groups displayed higher levels of internalizing problems than the two other groups, but did not differ significantly from each other. There were no main effects of sex or age on group status.

Next, we used one-way ANOVAs to determine whether the seven personality scales could distinguish among the four syndrome groups. We found significant main effects for Ego undercontrol, $F(3, 112) = 13.77, p < .01$, Extraversion, $F(3, 112) = 5.44, p < .01$, Agreeableness, $F(3, 112) = 9.31, p < .01$, Conscientiousness, $F(3, 112) = 4.06, p < .01$, and Neuroticism, $F(3, 112) = 3.36, p < .05$, and a marginal effect for Ego Resiliency, $F(3, 112) = 2.45, p < .10$. Figure 1 shows these effects. Table 7 shows the results of post hoc comparisons using Newman-Keuls tests (with alpha set at .05). These comparisons reveal that, relative to the other groups, externalizers were the most undercontrolled and least neurotic children. Internalizers, on the other hand, were the most conscientious, and least extraverted youth. Internalizers were also more agreeable than the externalizing and comorbid groups, but did not differ significantly on this dimension from the nonclinical group. Comorbid youth exhibited a distinct, though moderate personality profile. They were significantly more undercontrolled, less resilient, and less agreeable than nonclinical children; they were less undercontrolled and more neurotic than externalizers; finally, they were more undercontrolled, more extraverted, less agreeable, and less conscientious than internalizers.

Discussion

Personality Correlates and Prediction

The results showed clear associations between the various personality dimensions and the broadband dimensions of behav-

Table 6
Results of Two Hierarchical Multiple Regression Analyses
Predicting Internalizing Behavior Problems:
Unique FFM and EC-ER Contributions

Model and step	R^2	Adjusted R^2	R^2 change	F of R^2 change
Unique FFM contribution				
1. Sex (boy = 1, girl = 2)	.01	.00	—	—
2. EC-ER model	.29	.27	.28	22.44***
3. FFM	.36	.32	.07	2.34*
Unique EC-ER contribution				
1. Sex (boy = 1, girl = 2)	.01	.00	—	—
2. FFM	.31	.27	.30	9.57***
3. EC-ER model	.36	.32	.05	4.27*

Note. FFM = Five-Factor Model; EC-ER = Ego control-Ego resiliency. All p values are two-tailed.
 * $p < .05$. *** $p < .001$.

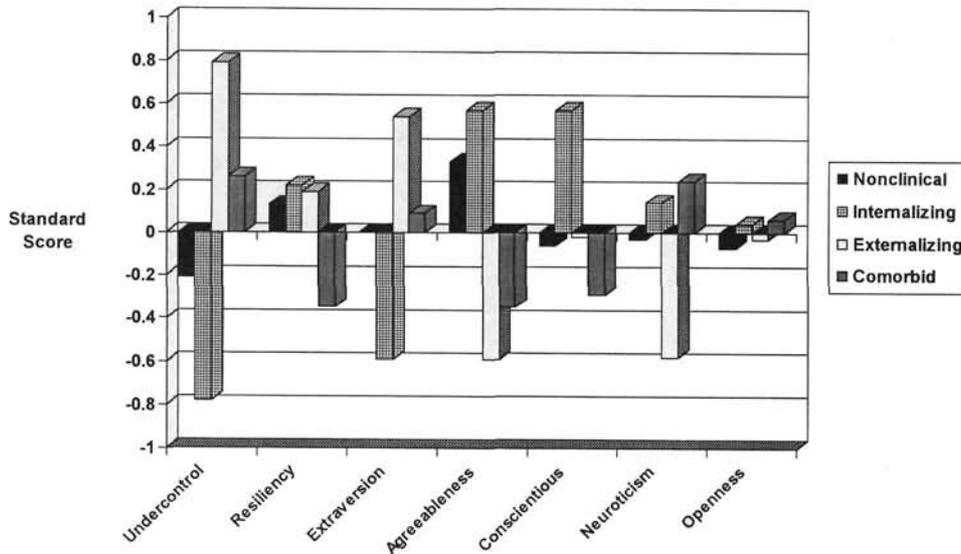


Figure 1. Mean level differences between nonclinical, externalizing, internalizing, and comorbid syndrome groups on personality scales in standard score units.

ior problems. As predicted, Ego control was associated with both dimensions of problem behavior, albeit in different directions. Whereas Ego undercontrol was linked positively to externalizing problems in children, it was negatively associated with internalizing problems.

These findings are partially consistent with those of Wolfson et al. (1987) who found Ego undercontrol to be positively associated with externalizing problems (but unrelated to internalizing problems) in their sample of clinic-referred preschool children. It is interesting to note that these results also mirror those of researchers studying a related construct; Noam et al. (1984) found that level of ego development (as described by Loevinger & Knoll, 1983) was predictive of externalizing (but not internalizing) problems. Although distinct from Ego undercontrol in a number of ways, the early stages of ego development are similarly characterized by a tendency toward the immediate gratification of needs. In the Noam et al. (1984) study, those children at the lowest level of ego development (theoretically

the most impulsive), were more likely than those at higher levels to show evidence of externalizing problem behaviors. This relationship remained stable even when such background variables as sex, age, and socioeconomic status were appropriately partialled (Noam et al., 1984). Furthermore, the present findings are consistent with studies that show poor impulse control to be related to a variety of externalizing problems including anti-social behavior, delinquency, and hyperactivity (e.g., Luengo, Carrillo-de-la-Pena, Otero, & Romero, 1994; Pulkkinen, 1986; Tremblay, Pihl, Vitaro, & Dobkin, 1994; White et al., 1994). The findings in this study are thus in harmony with those of other investigators, indicating positive associations between underregulation of impulse, on the one hand, and externalizing behavior problems on the other.

Ego resiliency, by contrast, was inversely related to both categories of behavior problems, indicating the consistent relevance of this personality dimension for rather different forms of dysfunction in children. In theory, brittle individuals possess low-level adaptive capabilities and are thus more likely to respond unfavorably to various environmental stressors (J. H. Block & Block, 1980). Consistent with this notion, the present results indicate that brittle children are more likely than resilient youngsters to express themselves in either an externalizing or internalizing direction. This pattern conforms with research showing that problems as varied as adolescent drug abuse (J. Block et al., 1988) and depressive symptomology (J. Block & Gjerde, 1990) are more prevalent among those with Ego-brittle personalities.

It appears that these two broad personality dimensions carry rather different implications for the prediction of behavior problems in children. Within this sample, Ego undercontrol was clearly the strongest predictor of externalizing behaviors in children, whereas behaviors of an internalizing nature were equally explained by Ego undercontrol and Ego resiliency. These find-

Table 7
Summary of Significant Group Differences Along the Seven Personality Dimensions

Personality dimension	Significant differences (Newman-Keuls test)
Ego undercontrol	E > C > N > I
Ego resiliency	N > C
Extraversion	C > I, E > I, N > I
Agreeableness	N > E, N > C, I > E, I > C
Conscientiousness	I > C, I > N, I > E
Neuroticism	C > E, I > E, N > E
Openness	No differences

Note. E = Externalizing; C = Comorbid; N = Nonclinical; I = Internalizing.

ings suggest important implications regarding the apparent overlap between the nominally related personality and psychopathology constructs. The common usage by some researchers of the terms *undercontrol* and *overcontrol* to describe externalizing and internalizing problems, respectively (e.g., Achenbach & Edelbrock, 1978; Weisz et al., 1987; Weisz et al., 1988), suggests that at root, these problems are expressions of faulty impulse regulation. The implication is that an undercontrol of impulse is generally expressed through various externalizing or acting out behaviors, and an overcontrol of impulse tends to result in the expression of internalizing behaviors such as depression or anxiety. Although this notion was partially confirmed by the present findings, the data suggest the need for a richer model, one that incorporates the potential value that a resilient or flexible personality structure might add to our understanding of behavior problem patterning in children. Our results suggest that the relative absence of such flexibility may predispose a young individual to developing an array of emotional and behavioral problems.

Consistent with Wolfson et al. (1987), we found the highest levels of psychopathology in brittle undercontrollers and brittle overcontrollers. Our findings suggest a potential pathology-dampening effect of Ego resiliency. With increasing levels of Ego resiliency, the likelihood that a child will express impulses in an externalizing or internalizing direction appears to be significantly reduced. This pattern is at least partially consistent with the view of J. Block et al. (1988) regarding the long-term implications of these personality dimensions that "if it is Ego-undercontrol that will get [a child] into trouble, it is Ego-resilience or its absence that will help decide whether [the child] works through and grows beyond his or her difficulties" (p. 352). Thus, not only are these personality dimensions implicated in the expression of child psychopathology, but they may also influence how effective various interventions are in helping a child work through his or her problems. This issue is explored later in this article.

Comorbidity and Personality

When children were categorized on the basis of the predominant form and level of psychopathology (i.e., externalizing vs. internalizing and clinical vs. nonclinical range), results indicated that externalizers, internalizers, and comorbid individuals possessed different personality characteristics. Relative to those in other categories, externalizers were impulsive extraverts who were disagreeable but low in neuroticism. Internalizers were overcontrolled introverts who were agreeable and conscientious. The latter profile was unexpected, given that internalizers were described by John et al. (1994) as neurotic and not conscientious.

Comorbid youth were similar to externalizers in that they tended to be undercontrolled and disagreeable, but unlike externalizers, they also tended to be neurotic, brittle, and not conscientious. Although the comorbid group displayed high levels of externalizing and internalizing problems quite similar to those found in the externalizing and internalizing groups, respectively, they were characterized by a unique, if low-level, personality profile that appears to belie the extent of their pathology. Considering the substantial co-occurrence of multiple problems in child

samples (e.g., Bird, Gould, & Staghezza, 1993), these results highlight the potential value of separating comorbid participants from single-diagnosis individuals when exploring the correlates of child psychopathology. Furthermore, given that these results were based on multiple raters, they highlight the fact that parents and youth do contribute important, unique information concerning child behavior across contexts (Achenbach et al., 1987; Loeber et al., 1989; Loeber, Green, & Lahey, 1990).

Although we believe that this is the first published study to explore the FFM dimensions in a clinic-based sample of children, the results are actually in accord with those reported by John et al. (1994) and Robins et al. (1994) in their nonclinical sample of Pittsburgh youth. When the impact of comorbidity is not considered in analyses, several key findings appear reliably across studies (a): Extraversion and agreeableness are relevant to understanding problems of an externalizing nature, (b) neuroticism is associated with problems of an internalizing nature, and (c) the alpha reliabilities of each FFM scale are fairly stable. Thus, given the broader age, ethnic, and gender diversity of our sample, the consistency with results from an independent, nonclinical sample is rather encouraging and supports the general applicability of the FFM across several populations.

Five-Factor Model Versus EC-ER Model

Also, the pattern of associations between variables across personality models is similar to that found by Robins et al. (1994) in adolescent boys. Ego resiliency seems to reflect, in part, the well-adjusted pole of each FFM dimension, whereas Ego undercontrol is primarily expressed in energetic, yet antagonistic and undependable behavior that reflects high Extraversion, low Agreeableness, and low Conscientiousness. Given the shared method variance and item overlap, the magnitude of these correlations is likely to be inflated (Robins et al., 1994). Nevertheless, these analyses produced a differential pattern of associations generally consistent with outcomes suggested by each theoretical model.

Exploring the relative predictive power of the FFM versus the Ego control-Ego resiliency model yielded interesting results. All personality variables except openness were significantly associated with measures of child psychopathology and were at least somewhat effective in discriminating between the diagnostic groups of externalizing, internalizing, comorbid, and nonclinical children. Although the FFM, relative to the Ego control-Ego resiliency model, appeared to be a stronger predictor of externalizing problems, there was no apparent difference in prediction of internalizing problems. Given the fact that the FFM scales were derived from a subset of the CCQ (48 of 100 items), these findings should argue for the theoretical and empirical strength of the FFM.

Of course, the FFM and Ego control-Ego resiliency models need not necessarily be in competition for explanatory power. Robins et al. (1994) suggested a framework whereby the personality regularities represented by the FFM are partially explained by the more dynamic dimensions of ego functioning. For example, the expression of typical neurotic behaviors (e.g., excessive worrying and sensitivity) may depend upon a dynamic interplay between the impulse-constraining Ego control and the brittle component of Ego resiliency. Thus, at different levels, the FFM

and Ego control-Ego resiliency models may offer complementary perspectives regarding personality structures underlying psychopathology in children.

Future Research

Several recommendations can be offered for future research. First, we suggest that a subset of the seven personality dimensions encompassed by the FFM and Ego control-Ego resiliency models may be studied in relation to psychotherapy and problem resolution in children. For example, in our research, efforts are currently underway to determine the short- and long-term implications of resilient personalities for therapeutic efficacy in our sample of children. It is not clear how malleable these personality dimensions may be, but their strong relationships with the major empirically derived forms of child psychopathology make them logical candidates for therapeutic attention as a part of treatment programs for problem behavior. In fact, the emphasis of several extant therapies on teaching strategies of self-control to hyperactive and aggressive children (Karoly, 1981; Kendall & Braswell, 1993; Meichenbaum, 1979) suggests a belief among some therapists and researchers in the importance of understanding the role of poor impulse control when treatment involves externalizing problems.

It is important to note that this study possesses several features that limit the conclusions that can be drawn. First, although we hypothesized a causal relationship from personality to psychopathology, we must note that the causal mechanism could flow in the opposite direction as well (from psychopathology to personality). Clearly more research is needed to determine the extent to which variations in levels of personality actually precede increases in child psychopathology. Using our longitudinal data, we plan to directly explore the issue of causality in future research. A second limitation arises with the use of teachers for ratings of personality and psychopathology. Having the same reporter provide both predictor and criterion data is likely to inflate correlations between variables. Although logistically difficult, future studies might seek to obtain personality and psychopathology ratings from different teachers.

Overall, this study represents a convergence of several lines of research that have been conducted relatively independently of one another. The dimensions of Ego control and Ego resiliency are psychodynamically rooted and represent efforts to identify and integrate key personality structures within children (J. H. Block & Block, 1980), and the FFM is an empirically derived framework that may offer a rather comprehensive representation of personality (John et al., 1994). The broadband externalizing and internalizing behavior dimensions, on the other hand, represent a systematic but atheoretical approach to classifying the range of problem behaviors that children exhibit in various contexts (Achenbach, 1991). One contribution of the present study may be to illustrate how weaving these previously separate strands together may enrich our understanding of child adaptation and dysfunction, moving us closer to an integrated picture of child personality and psychopathology.

References

- Achenbach, T. M. (1991). *Integrative guide for the 1991 CBCL/4-18 YSR, and TRF profiles*. Burlington: University of Vermont, Department of Psychiatry.

- Achenbach, T. M., & Edelbrock, C. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin*, *85*, 1275-1301.
- Achenbach, T., & Edelbrock, C. (1986). *Manual for the Teacher's Report Form and teacher version of the Child Behavior Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T., & Edelbrock, C. (1987). *Manual for the Youth Self-Report and Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T., & Edelbrock, C. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213-232.
- Allsopp, J. F., & Feldman, P. (1976). Personality and antisocial behaviour in schoolboys. *British Journal of Criminology*, *16*, 337-351.
- Arend, R., Gove, F. L., & Sroufe, L. A. (1979). Continuity of individual adaptation from infancy to kindergarten: A predictive study of ego-resiliency and curiosity in preschoolers. *Child Development*, *50*, 950-959.
- Asendorpf, J. B., & van Aken, M. A. G. (1991). Correlates of the temporal consistency of personality patterns in childhood. *Journal of Personality*, *59*, 689-703.
- Bird, H., Gould, M., & Staghezza, B. (1993). Patterns of diagnostic comorbidity in a community sample of children aged 9 through 16 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*, 361-368.
- Block, J. (1950). *An experimental investigation of the construct of ego-control*. Unpublished doctoral dissertation, Stanford University.
- Block, J. (1971). *Lives through time*. Berkeley, CA: Bancroft Books.
- Block, J. (1978). *The Q-sort method in personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologists Press.
- Block, J. (1995a). A contrarian view of the Five-Factor Approach to personality description. *Psychological Bulletin*, *117*, 187-215.
- Block, J. (1995b). Going beyond the five factors given: Rejoinder to Costa and McCrae (1995) and Goldberg and Saucier (1995). *Psychological Bulletin*, *117*, 226-229.
- Block, J., Block, J. H., & Keyes, S. (1988). Longitudinally foretelling drug use in adolescence: Early childhood personality and environmental precursors. *Child Development*, *59*, 339-355.
- Block, J., & Gjerde, P. F. (1990). Depressive symptoms in late adolescence: A longitudinal perspective on personality antecedents. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 334-360). New York: Cambridge University Press.
- Block, J., Gjerde, P. F., & Block, J. H. (1991). Personality antecedents of depressive tendencies in 18-year-olds: A prospective study. *Journal of Personality and Social Psychology*, *60*, 726-738.
- Block, J., & Kremen, A. M. (1996). IQ and Ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, *70*, 349-361.
- Block, J. H. (1951). *An experimental study of a topological representation of ego structure*. Unpublished doctoral dissertation, Stanford University.
- Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota Symposia on Child Psychology* (Vol. 13, pp. 39-101). Hillsdale, NJ: Erlbaum.
- Caspi, A., Block, J., Block, J. H., Klopp, B., Lynam, D., Moffitt, T. E., & Stouthamer-Loeber, M. (1992). A "common-language" version of the California Child Q-Set for personality assessment. *Psychological Assessment*, *4*, 512-523.

- Costa, P. T., Jr., & McCrae, R. R. (1995). Solid ground in the wetlands of personality: A reply to Block. *Psychological Bulletin*, *117*, 216–220.
- Costa, P. T., Jr., & Widiger, T. A. (1994). Introduction: Personality disorders and the Five-Factor Model of Personality. In P. T. Costa & T. A. Widiger (Eds.), *Personality disorders and the Five-Factor Model of Personality* (pp. 1–10). Washington, DC: American Psychological Association.
- Digman, J. M. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality*, *57*, 195–214.
- Digman, J. M., & Inouye, J. (1986). Further specification of the five robust factors of personality. *Journal of Personality and Social Psychology*, *50*, 116–123.
- Digman, J. M., & Takemoto-Chock, N. K. (1981). Factors in the natural language of personality: Re-analysis, comparison, and interpretation of six major studies. *Multivariate Behavioral Research*, *16*, 149–170.
- Dollinger, S. J. (1992). Idiographic and nomothetic child assessment: Convergence between the California Child Q-Sort and the personality inventory for children. *Personality and Individual Differences*, *13*, 585–590.
- Eysenck, S. B. G. (1981). Impulsiveness and antisocial behavior in children. *Current Psychological Research*, *1*, 31–37.
- Fagan, P. J., Wise, T. N., Schmidt, C. W., Ponticas, Y., Marshall, R. D., & Costa, P. T., Jr. (1991). A comparison of the five-factor personality dimensions in males with sexual dysfunction and males with paraphilia. *Journal of Personality Assessment*, *57*, 434–448.
- Funder, D. C., & Block, J. (1989). The role of ego-control, ego-resiliency, and IQ in delay of gratification in adolescence. *Journal of Personality and Social Psychology*, *57*, 1041–1050.
- Funder, D. C., Block, J. H., & Block, J. (1983). Delay of gratification: Some longitudinal personality correlates. *Journal of Personality and Social Psychology*, *44*, 1198–1213.
- Furnham, A., & Thompson, J. (1991). Personality and self-reported delinquency. *Personality and Individual Differences*, *12*, 585–593.
- Goldberg, L. R., & Saucier, G. (1995). So what do you propose we use instead? A reply to Block. *Psychological Bulletin*, *117*, 221–225.
- Granger, D. A., Stansbury, K., & Henker, B. (1994). Preschoolers' behavioral and neuroendocrine responses to social challenge. *Merrill-Palmer Quarterly*, *40*, 190–211.
- Graziano, W. G., & Ward, D. (1992). Probing the Big Five in adolescence: Personality and adjustment during a developmental transition. *Journal of Personality*, *60*, 425–439.
- John, O. P. (1990). The "Big Five" factor taxonomy: Dimensions of personality in the natural language and questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). New York: Guilford.
- John, O. P., Caspi, A., Robins, R. W., Moffitt, T. E., & Stouthamer-Loeber, M. (1994). The "Little Five": Exploring the nomological network of the Five-Factor Model of personality in adolescent boys. *Child Development*, *65*, 160–178.
- Karoly, P. (1981). Self-management problems in children. In E. J. Mash & L. G. Terdal (Eds.), *Behavioral Assessment of Childhood Disorders* (pp. 79–126). New York: Guilford Press.
- Kendall, P., & Braswell, L. (1993). *Cognitive behavior therapy for impulsive children* (2nd ed.). New York: Guilford Press.
- Kendall, P., & Sessa, F. M. (1993). Cognitive assessment for intervention. In T. R. Kratochwill & R. J. Morris (Eds.), *Handbook of psychotherapy with children and adolescents* (pp. 58–74). Boston: Allyn & Bacon.
- Klohn, E. C. (1996). Conceptual analysis and measurement of the construct of ego-resiliency. *Journal of Personality and Social Psychology*, *70*, 1067–1079.
- Kohnstamm, G. A., Halverson, C. F., Jr., Havill, V. L., & Mervielde, I. (1996). Parents' free descriptions of child characteristics: A cross-cultural search for the developmental antecedents of the Big Five. In S. Harkness & C. M. Super (Eds.), *Parents' cultural belief systems: Their origins, expressions, and consequences* (pp. 27–55). New York: Guilford Press.
- Lambert, M. C., Weisz, J. R., Knight, F., & Desrosiers, M. (1992). Jamaican and American adult perspectives on child psychopathology: Further exploration of the threshold model. *Journal of Consulting and Clinical Psychology*, *60*, 146–149.
- Lane, D. A. (1987). Personality and antisocial behaviour: A long-term study. *Personality and Individual Differences*, *8*, 799–806.
- Loeber, R., Green, S. M., & Lahey, B. B. (1990). Mental health professional's perception of the utility of children, mothers, and teachers as informants on childhood psychopathology. *Journal of Clinical Child Psychology*, *19*, 136–143.
- Loeber, R., Green, S. M., Lahey, B. B., & Stouthamer-Loeber, M. (1989). Optimal informants on childhood disruptive behaviors. *Development and Psychopathology*, *1*, 317–337.
- Loevinger, J., & Knoll, E. (1983). Personality: Stages, traits, and the self. *Annual Review of Psychology*, *34*, 195–222.
- Luengo, M. A., Carrillo-de-la-Pena, M. T., Otero, J. M., & Romero, E. (1994). A short-term longitudinal study of impulsivity and antisocial behavior. *Journal of Personality and Social Psychology*, *66*, 542–548.
- McConaughy, S. H., Achenbach, T. M., & Gent, C. L. (1988). Multi-axial empirically based assessment: Parent, teacher, observational, cognitive, and personality correlates of child behavior profiles for 6–11-year-old boys. *Journal of Abnormal Child Psychology*, *16*, 485–509.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, *60*, 175–215.
- Meichenbaum, D. (1979). Teaching children self-control. In B. B. Lahey & A. E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 2, pp. 1–33). New York: Plenum Press.
- Mischel, W., Shoda, Y., & Peake, P. K. (1988). The nature of adolescent competencies predicted by preschool delay of gratification. *Journal of Personality and Social Psychology*, *54*, 687–696.
- Moffitt, T. E. (1993). Life-course-persistent and adolescence-limited antisocial behavior: A developmental taxonomy. *Psychological Review*, *100*, 674–701.
- Noam, G. G., Hauser, S. T., Santostefano, S., Garrison, W., Jacobson, A. M., Powers, S. I., & Mead, M. (1984). Ego development and psychopathology: A study of hospitalized adolescents. *Child Development*, *55*, 184–194.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research: Explanation and prediction*. Orlando, FL: Harcourt Brace Jovanovich.
- Pulkkinen, L. (1986). The role of impulse control in the development of antisocial and prosocial behavior. In D. Olweus, J. Block, & M. Radke-Yarrow (Eds.), *Development of antisocial and prosocial behavior: Research, theories, and issues* (pp. 149–175). San Diego, CA: Academic Press.
- Robins, R. W., John, O. P., & Caspi, A. (1994). Major dimensions of personality in early adolescence: The Big Five and beyond. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 267–291). Hillsdale, NJ: Erlbaum.
- Shedler, J., & Block, J. (1990). Adolescent drug use and psychological health: A longitudinal inquiry. *American Psychologist*, *45*, 612–630.
- Strayer, J., & Roberts, W. (1989). Children's empathy and role taking: Child and parental factors, and relations to prosocial behavior. *Journal of Applied Developmental Psychology*, *10*, 227–239.
- Tremblay, R., Pihl, R. O., Vitaro, F., & Dobkin, P. L. (1994). Predicting early onset of male antisocial behavior from preschool behavior. *Archives of General Psychiatry*, *51*, 732–739.
- Trull, T. J., & Sher, K. J. (1994). Relationship between the Five-Factor

- Model of personality and Axis I disorders in a nonclinical sample. *Journal of Abnormal Psychology, 103*, 350-360.
- Vaughn, B. E., & Martino, D. G. (1988). Q-sort correlates of visual regard in groups of young preschool children. *Developmental Psychology, 24*, 589-594.
- Waters, E., Garber, J., Gornal, M., & Vaughn, B. E. (1983). Q-sort correlates of visual regard among preschool peers: Validation of a behavioral index of social competence. *Developmental Psychology, 21*, 508-522.
- Waters, E., Wippman, J., & Sroufe, L. A. (1979). Attachment, positive affect and competence in the peer group: Two studies in construct validation. *Child Development, 50*, 821-829.
- Wechsler, D. (1974). *Manual for the Wechsler Intelligence Scale for Children—Revised*. New York: Psychological Corporation.
- Weisz, J. R., Suwanlert, S., Chaayasit, W., Weiss, B., Walter, B. R., & Anderson, W. W. (1988). Thai and American perspectives on over- and undercontrolled child behavior problems: Exploring the threshold model among parents, teachers, and psychologists. *Journal of Consulting and Clinical Psychology, 56*, 601-609.
- Weisz, J. R., Weiss, B., Alicke, M. D., & Klotz, M. L. (1987). Effectiveness of psychotherapy with children and adolescents: A meta-analysis for clinicians. *Journal of Consulting and Clinical Psychology, 55*, 542-549.
- White, J. L., Moffitt, T. E., Caspi, A., Bartusch, D. J., Needles, D. J., & Stouthamer-Loeber, M. (1994). Measuring impulsivity and examining its relationship to delinquency. *Journal of Abnormal Psychology, 103*, 192-205.
- Widiger, T. A., & Trull, T. J. (1992). Personality and psychopathology: An application of the five-factor model. *Journal of Personality, 60*, 363-393.
- Wolfson, J., Fields, J. H., & Rose, S. A. (1987). Symptoms, temperament, resiliency, and control in anxiety-disordered preschool children. *The American Academy of Child and Adolescent Psychiatry, 26*, 16-22.

Received October 4, 1995

Revision received December 30, 1996

Accepted December 30, 1996 ■