Journal of Consulting and Clinical Psychology
2001, Vol. 69, No. 2, 240–251

0022-006X/01/$5.00 DOI: 10.1037//0022-006X.69.2.240

Specificity of Relations Between Children's Control-Related Beliefs and Internalizing and Externalizing Psychopathology

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The authors examined the specificity of the relation between 3 types of control-related beliefs and internalizing and externalizing psychopathology in a sample of 290 clinic-referred children aged 7 to 17 years. Self-reported beliefs about *control* (the capacity to cause an intended outcome), *contingency* (the degree to which a desired outcome can be controlled by a relevant behavior), and *competence* (an individual's ability to produce the relevant behavior) across 3 domains (academic, behavioral, and social) showed more specific relations with psychopathology than have been previously reported. Among children with externalizing psychopathology, internalizing psychopathology may be specifically associated with increased self-critical awareness about their conduct; externalizing psychopathology may attenuate the specific negative relation between internalizing psychopathology and control-related beliefs in the social domain.

According to a number of authors, the belief in one's capacity to cause a desired effect in interactions with people and other aspects of one's environment is a necessary element in the initiation and persistence of goal-directed behavior (e.g., Bandura, 1977; Rotter, 1966). This hypothesis has received strong confirmation, with perceptions of personal control being linked to motivation, persistence, planning and problem-solving behaviors, task performance, and academic achievement (e.g., Findley & Cooper, 1983; Rotter, 1966; Skinner, 1995).

Investigators also have theorized about and examined the relation between perceived control[1] and psychopathology, and there is fairly strong evidence supporting a relation. Depressive and anxious symptoms have been shown to be correlated with an external locus of control (McCauley, Mitchell, Burke, & Moss, 1988; Ollendick, 1979; Rawson, 1992; Siegel & Griffin, 1984) that reflects the perception that outcomes are contingent on factors external to the individual (e.g., other people, luck, chance) and beyond one's personal control. In addition, children with depressive symptomatology have been found to make causal attributions that reflect learned helplessness (Brown & Siegel, 1988; Nolen-Hoeksema, Girgus, & Seligman, 1986; Seligman et al., 1984; Siegel & Griffin, 1984), which indirectly suggests perceptions of low control. Thus, there is evidence linking child psychopathology with low levels of perceived control.

However, in part because of the way in which perceived control has been conceptualized (see below), most of this research has focused on a restricted range of psychopathology—internalizing problems in general and depressive symptomatology in particular—with few studies examining the relation between perceived control and externalizing problems such as aggression or delinquency. Those that have done so have not produced consistent results (e.g., Linn & Hodge, 1982; Ollendick, 1979; Rothbaum, Wolfer, & Visintainer, 1979; Weigel, Wertlieb, & Feldstein, 1989); in addition, an even smaller handful of studies have included an assessment of both internalizing and externalizing forms of psychopathology (Ollendick, 1979; Rothbaum et al., 1979). Consequently, little is known about the extent to which the relation between perceived control and psychopathology is specific to certain forms of child psychopathology or whether it reflects a relation with child psychopathology in general.

There are reasons to think that the relation between perceived control and psychopathology both may and may not be specific to internalizing problems. On the one hand, several theories suggest specific causal pathways between low perceived control (or related

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This article was based, in part, on Susan S. Han's doctoral dissertation. This research was supported in part by National Institute of Mental Health (NIMH) Research Grants RO1-MH49522 and 1-RO1-MH54237-01 and by NIMH Research Scientist Award K05-MH01161 to John R. Weisz.

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[1] Perceived control has been conceptualized in a variety of related but nonetheless distinct ways. Four of the most influential theoretical frameworks include (a) locus of control (Lefcourt, 1976; Rotter, 1966), (b) attribution theory (Weiner, 1985; Weiner, Heckhausen, Meyer, & Cook, 1972), (c) learned helplessness (Abramson, Seligman, & Teasdale, 1978), and (d) self-efficacy theory (Bandura, 1977; Bandura, Adams, & Beyer, 1977)—all of which refer to different aspects of control.

constructs) and depression. For instance, the hopelessness theory of depression (e.g., Abramson, Metalsky, & Alloy, 1989) posits that, at least for some people, stable and global attributions regarding the causes of negative events (which likely reflect low perceived control) result in feelings of hopelessness that, in turn, serve as a proximal cause of depression. Thus, this theory posits a causal pathway from low levels of perceived control that is specific to depression.

On the other hand, such a link does not preclude a relation between low perceived control and other psychopathology, such as externalizing problems (Garber & Hollon, 1991). In fact, theories such as the frustration–aggression hypothesis (Berkowitz, 1989) provide some rationale for positing a relation between externalizing problems and low perceived control; for example, an inability to control the environment and the subsequent perceptions of this inability could lead to an aversive frustration, which, in turn, could lead to aggression. There is evidence supporting such a possibility; Weiss, Süsser, and Catron (1998), for example, reported that attributions of external control (i.e., attributions that a force other than oneself controls the outcome) serve as a "common factor" for both internalizing and externalizing psychopathology.

Little attention has been paid to the differentiation of beliefs about various aspects of control. In general, most investigations that have examined the relation between perceived control and psychopathology have conceptualized control as a unidimensional construct, namely locus of control. However, the locus of control construct combines judgments about the *contingency* of relations between behaviors and outcomes (referring to the degree to which a desired outcome can be controlled by a relevant behavior) with judgments about the individual's personal *competence* (referring to the individual's ability to execute the relevant behavior). Under these conditions, it is unclear whether perceptions of uncontrollability result from a belief in a lack of contingency between relevant behaviors and outcomes, a belief that one lacks the ability or competence to execute these particular behaviors, or a combination of both (Skinner, Chapman, & Baltes, 1988a, 1988b; Weisz et al., 1989; Weisz & Stipek, 1982). Moreover, it is possible that beliefs about control, contingency, and competence may have specific relations with psychopathology (e.g., Weisz, Weiss, Wasserman, & Rintoul, 1987); for example, perceptions of low control might be related to both internalizing and externalizing problems, whereas perceptions of low competence might be related to internalizing problems only. Thus, not only does the specificity of relations with different forms of psychopathology need to be examined, but also the specificity of relations with different types of control-related beliefs (the term *control-related beliefs* is hereinafter used to refer collectively to the three types of beliefs about control, contingency, and competence).

In the present study, control-related beliefs were conceptualized using the contingency–competence–control model (Weisz, 1984, 1986a, 1986b, 1990; Weisz & Stipek, 1982), in which *control* is defined as the capacity to cause an intended outcome (e.g., getting a desired grade, making a friend) and construed as a joint function of outcome contingency and personal competence. The belief that a desired outcome is contingent on a specific behavior and the belief that one is competent in that specific behavior are both necessary components of the belief that one can control an outcome. However, beliefs about contingency and competence are expected to significantly predict, but not fully account for, beliefs about control because judgments about control may be influenced by various additional factors, some of which are transitory or based on recent events (e.g., confidence borne of a recent success, a belief that a generally fair teacher is mad at me today). Thus, prediction of phenomena thought to be related to low levels of control-related beliefs can be strengthened if measures of perceived contingency and perceived competence are complemented by a measure of perceived control, to capture variance not accounted for by perceived contingency and competence alone. Moreover, it is possible for these three types of control-related beliefs to be differentially related to psychopathology. Hence, to examine the specific relations between these beliefs and psychopathology, we assessed beliefs about control, contingency, and competence in the study by using separate measures.

To address another potentially important aspect of specificity, we also evaluated these three types of control-related beliefs with respect to three important domains of child functioning: academics (grades, school work), behavior–conduct (staying out of trouble), and social acceptance by peers. Although most previous studies have examined only global perceived control, evidence from developmental and clinical studies has suggested that children's control-related beliefs might vary as a function of the particular domain of goal-directed behavior (e.g., Evans, Brody, & Noam, 1995; Harter, 1982, 1985). To examine whether the relation between psychopathology and beliefs varied with the domain to which these beliefs referred, we assessed control-related beliefs with regard to the academic, behavioral, and social domains.

Differentiating control-related beliefs along these two dimensions (type and domain of beliefs), in this study we focused on the specificity of relations with internalizing and externalizing child psychopathology. These two broad-band psychopathology factors were chosen because they encompass most of the specific child psychopathology syndromes such as depression and delinquency (Cicchetti & Toth, 1991), yet they also possess a clear theoretical distinction that might well pertain to specificity (see e.g., Quay & Werry, 1986).

A clinic-referred sample of diagnostically heterogeneous children was used, for two reasons. First, our use of a referred sample ensured that there would be sufficient levels of serious psychopathology for analytic purposes. Second, a clinic-referred sample allowed us to address the question of whether the relation between control-related beliefs and psychopathology is specific to internalizing or externalizing psychopathology rather than psychopathology in general.

In addition, unlike most previous investigations in this area, the present study used formal diagnoses based on *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev. [*DSM–III–R*]; American Psychiatric Association, 1987) to assess child psychopathology. Although the use of diagnoses has some drawbacks, it also has certain advantages (Jensen et al., 1996). Most importantly, it allows duration criteria and essential symptoms to be part of the psychopathology assessment (e.g., 2-week duration of symptoms, and essential symptoms of depressed mood or anhedonia for a diagnosis of major depressive disorder), which helps to ensure that the variables assessed represent serious psychopathology. To minimize the effects of shared method variance that might artifactually inflate the relation between children's beliefs and psychopathology, diagnoses were based on parent reports.

Method

Participants

Participants in this study were 290 children and adolescents (collectively referred to hereinafter as "children") ranging in age from 7 to 17 years (M = 12.2, SD = 2.5) who had been referred to 1 of 10 community mental health clinics in Central and Southern California. As is typical of clinic-referred samples, the sample contained more boys (66%) than girls (34%). Table 1 presents the demographic characteristics of the sample overall and by diagnostic groups. The four groups (see *Diagnostic Categorization*, below) did not differ on the various family demographic factors. Ninety-three percent of the parents or guardians participating in the study were mothers or other female parental figures.

Measures

Child psychopathology. Child psychopathology was assessed using the parent-report version of the Diagnostic Interview Schedule for Children (DISC–2.3; Fisher, Wicks, Schaffer, Piacentini, & Lapkin, 1992), which is a highly structured diagnostic instrument intended for administration by nonclinicians. Interviewers are trained to administer the DISC following standardized procedures, which entail reading the items exactly as written. Psychiatric diagnoses are generated by using computerized diagnostic algorithms that follow *DSM–III–R* criteria. The test–retest reliability of the DISC with parent informants ranges from .55 to .88 for a 1- to 3-week interval for the most common diagnoses (Schwab-Stone et al., 1993). The concordance between DISC–2.3 and clinician-derived diagnoses based on parent interviews ranges from 0.48 to 0.74 for the major diagnostic clusters (Schwab-Stone et al., 1996). The validity and sensitivity of the DISC have been reported in several studies (e.g., Schwab-Stone et al., 1996; Piacentini et al., 1993; Fisher et al., 1993) to be acceptable.

We used the DISC–2.3 to diagnose depressive disorders and anxiety disorders for determination of internalizing psychopathology, and we used disruptive behavior disorders for determination of externalizing psychopathology. Depressive disorders included major depressive disorder and dysthymia. Anxiety disorders included simple phobias, social phobia, agoraphobia, panic disorder, separation anxiety disorder, avoidant disorder, overanxious disorder, generalized anxiety disorder, and obsessive–compulsive disorder. Disruptive behavior disorders included attention deficit–hyperactivity disorder, oppositional defiant disorder, and conduct disorder. Other diagnoses that were obtained from the DISC–2.3 but not used in the classification of children into diagnostic groups (see *Diagnostic Categorization,* below) included bulimia, anorexia nervosa, elective mutism, trichotillomania, enuresis, encopresis, and tic disorders.

Control-related beliefs. Beliefs about control, contingency, and competence were assessed using the Perceived Control Scale for Children (Weisz, 1991), the Perceived Contingency Scale (Weisz, Proffitt, & Sweeney, 1991), and the Self-Perception Profile for Children (SPP; Harter, 1985), respectively. Table 2 presents the correlation matrix of the control-related measures. The Perceived Control Scale for Children is a self-report measure of children's perceptions of personal control in three domains. The measure contains 24 items (e.g., "I can get good grades if I really try") that

Table 1
Demographic Characteristics of the Sample, by Diagnostic Group

Demographic	No-INT–No-EXT (n = 70)	EXT-only (n = 74)	INT-only (n = 51)	Comorbid (n = 95)	Overall (n = 290)
Child's age, in years, M (SD)	12.4 (2.7)	12.0 (2.3)	12.3 (2.3)	12.1 (2.7)	12.2 (2.5)
Child's gender (% boys)	56	76	57	70	66
Child's ethnicity (%)					
Caucasian (non-Hispanic)	40	46	55	56	50
African American	19	13	18	11	15
Hispanic	24	9	10	17	15
Mixed–Other	18	32	16	17	21
Annual household income (%)					
≤$15,000	45	46	30	50	42
$15,001–$30,000	27	13	42	22	28
$30,001–$45,000	15	9	14	14	15
≥$45,001	13	32	14	14	14
Parent's age, in years, M (SD)	40.6 (8.4)	37.7 (7.1)	39.6 (8.1)	39.0 (7.7)	39.1 (7.8)
Parent's level of education (%)					
11th grade or less	20	16	15	22	19
High school diploma	32	32	20	23	27
At least 1 year of college	31	36	46	33	35
College degree (Bachelor's)	14	10	11	14	13
Graduate or Professional degree	3	6	9	9	7
Parent's marital status (%)					
Married	36	47	34	39	40
Divorced	47	25	43	35	36
Separated	4	16	9	10	10
Widowed	2	5	3	3	3
Never married	11	7	11	13	11
Family living arrangement (%)					
With both biological parents	14	23	22	30	23
With mother	61	66	70	59	63
With father	10	8	4	4	7
Other (e.g., aunt, grandmother)	14	3	4	7	7

Note. Percentages may not add up to 100 because of rounding. No-INT–No-EXT = no internalizing or externalizing disorders; EXT-only = externalizing disorders only; INT-only = internalizing disorders only; Comorbid = both internalizing and externalizing disorders.

Table 2
Correlation Matrix of the Control-Related Scales and Subscales

	Control-related scale	1	2	3	4	5	6	7	8	9	10	11	12
1	Perceived Control	—											
2	Academic	.87***	—										
3	Behavioral	.85***	.69***	—									
4	Social	.77***	.51***	.40***	—								
5	Perceived Contingency	.54***	.50***	.56**	.27***	—							
6	Academic	.47***	.51***	.47***	.20**	.85***	—						
7	Behavioral	.41***	.35***	.50***	.15**	.86***	.58***	—					
8	Social	.44***	.34***	.38***	.34***	.73***	.41***	.49***	—				
9	Perceived Competence	.43***	.35***	.31***	.40***	.21***	.18**	.20**	.14*	—			
10	Academic	.37***	.36***	.27***	.31***	.21***	.19**	.20**	.11	.81***	—		
11	Behavioral	.33***	.28***	.41***	.12*	.27***	.23***	.31***	.09	.71***	.46***	—	
12	Social	.21***	.11	−.01	.43***	−.02	−.04	−.09	.10	.62***	.28***	.07	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

children rate in regard to how true each statement is for them using a 4-point scale. Ratings are summed to produce scores for the total scale, as well as for three 8-item subscales for the Academic (academic success), Behavioral (conduct, ability to stay out of trouble), and Social (peer acceptance) domains. To allow for cross-scale comparisons, and to make repeated measures analyses appropriate, the scores for the subscales were transformed into item mean scores ranging from 1 to 4, with higher scores reflecting higher levels of perceived control. For the present sample, internal consistency alphas were .88 for the full scale, and .80, .79, and .74 for the Academic, Behavioral, and Social Control subscales, respectively. Test–retest reliabilities for a 6-month interval for 144 of the sample were .55 for the full scale, and .58, .51, and .53 for the Academic, Behavioral, and Social Control subscales, respectively.

The Perceived Contingency Scale is a 30-item self-report measure of children's beliefs about the degree of contingency between specific behaviors and outcomes for children in general (e.g., "Kids who work hard in school get good grades"). In addition to a total score, children's ratings (of how true each statement is on a 4-point scale) are summed to form subscale scores for the Academic, Behavioral, and Social domains. As with the Perceived Control Scale for Children, subscale scores were transformed into item mean scores ranging from 1 to 4, with higher scores reflecting higher levels of perceived contingency. For the present sample, internal consistency alphas were .85 for the full scale, and .78, .75, and .53 for the Academic, Behavioral, and Social Contingency subscales, respectively. Test–retest reliabilities for a 6-month interval for 149 of the sample were .67 for the full scale, and .68, .63, and .46 for the Academic, Behavioral, and Social Contingency subscales, respectively.

The SPP is a self-report measure of children's perceptions of their personal competence and self-adequacy in the domains of academics–scholastics, behavioral conduct, social acceptance, physical appearance, and athletics, as well as global self-worth. The 18 items for the Scholastic Competence, Behavioral Conduct, and Social Acceptance subscales were administered in the present study. The SPP uses a structured alternative format that presents two contrasting descriptions (e.g., "Some kids feel that they are good at their school work—BUT—Other kids worry about whether they can do the school work assigned to them"). Children first choose which contrasting description is more true for them and then rate how true the description is for them, producing a 4-point scale. As with the other two control-related beliefs scales, subscale scores were transformed into item mean scores ranging from 1 to 4, with higher scores reflecting higher levels of perceived competence. For the present sample, internal consistency alphas were .77, .78, and .73 for the Academic, Behavioral, and Social Competence subscales, respectively. Test–retest reliabilities for a 6-month interval for 143 of the sample were .55, .66, and .61 for the Academic, Behavioral, and Social Competence subscales, respectively.

Procedure

The present study was part of a larger investigation of psychotherapy for children in community mental health clinics in Central and Southern California. During the initial intake interview at the clinic, the clinician described the project to the family. Families who consented to be contacted by the research project were provided more detailed information over the telephone by research staff. Interviews with participants were conducted prior to, or within 3 weeks after, the start of treatment at the clinic. As part of a host of other measures assessing child and family adjustment, the measures were individually administered to parents and children in separate rooms; the order of presentation of the measures was randomly determined, with a few constraints (e.g., basic demographic information was collected at the beginning of the interview).

Diagnostic Categorization

We used diagnoses obtained from the DISC–2.3 to determine the level of the two broad-band psychopathology factors (Internalizing Disorder [INT] and Externalizing Disorder [EXT]). Children diagnosed with one or more of the internalizing disorders (depressive disorders and anxiety disorders)—irrespective of other noninternalizing diagnoses—were classified as having an internalizing disorder (Yes-INT); those who were not diagnosed with an internalizing disorder were classified as having no internalizing disorder (No-INT). Separately, children who were diagnosed with one or more of the externalizing disorders (disruptive behavior disorders)—irrespective of other nonexternalizing diagnoses—were classified as having an externalizing disorder (Yes-EXT); those who were not diagnosed with an externalizing disorder were classified as having no externalizing disorder (No-EXT).

The combination of the two psychopathology factors produced four groups: (a) a No-INT–No-EXT group (n = 70; 24%) with no internalizing and no externalizing diagnoses[2]; (b) an EXT-only group (n = 74; 25%) with externalizing diagnoses but no internalizing diagnoses; (c) an INT-only group (n = 51; 18%) with internalizing diagnoses but no externalizing diagnoses; and (d) a comorbid group (n = 95; 33%) with both internalizing and externalizing diagnoses.

For the sample, the mean number of internalizing and externalizing diagnoses was 2.1 diagnoses (SD = 2.0). Fifty-three percent of the sample

[2] Although the children in the No-INT–No-EXT group had no internalizing or externalizing diagnoses, 9% had other diagnoses that were neither an internalizing nor an externalizing disorder, such as enuresis or encopresis (n = 2), tics (n = 3), and trichotillomania (n = 1); others displayed symptomatology that did not meet the threshold for any diagnosis.

Table 3
Means (and Standard Deviations) of Children's Ratings of Control-Related Beliefs, as a Function of Type of Belief, Domain, Internalizing Disorder (INT), and Externalizing Disorder (EXT)

Type of belief and domain	Group			
	No-INT–No-EXT (n = 70)	EXT-only (n = 74)	INT-only (n = 51)	Comorbid (n = 95)
Perceived Control				
Academic	3.55 (0.43)	3.47 (0.51)	3.55 (0.49)	3.38 (0.55)
Behavioral	3.34 (0.49)	3.23 (0.57)	$3.37\ (0.55)_{a}$	$3.11\ (0.61)_{a}$
Social	$3.26\ (0.52)_{b}$	3.30 (0.53)	$3.07\ (0.60)_{b}$	3.15 (0.55)
Perceived Contingency				
Academic	3.03 (0.54)	3.12 (0.56)	3.19 (0.54)	2.99 (0.55)
Behavioral	2.97 (0.55)	2.93 (0.52)	3.05 (0.51)	2.99 (0.51)
Social	2.95 (0.40)	3.00 (0.40)	3.04 (0.42)	3.01 (0.40)
Perceived Competence				
Academic	2.69 (0.60)	2.84 (0.71)	2.60 (0.76)	2.65 (0.76)
Behavioral	2.85 (0.69)	2.71 (0.71)	$2.98\ (0.74)_{c}$	$2.64\ (0.68)_{c}$
Social	$3.00\ (0.62)_{d}$	2.96 (0.66)	$2.69\ (0.84)_{d,e}$	$2.99\ (0.69)_{e}$

Note. Paired comparisons sharing a subscript notation are significantly different from each other (pair b is marginally significant).

received more than one internalizing or externalizing diagnosis; for those with at least one such diagnosis, the mean was 2.8 diagnoses (SD = 1.8). Twenty percent of the sample were also diagnosed with other noninternalizing and nonexternalizing disorders, primarily enuresis or encopresis (n = 20) and tic disorders (n = 32); over half of these children with other diagnoses were from the comorbid group. Because the purpose of the study was to determine the relation between control-related beliefs and internalizing and externalizing psychopathology, these other diagnoses were not considered in the classification of children for the Internalizing Disorder and Externalizing Disorder factors.

It is important to note that the two psychopathology factors do not represent a comparison between psychopathology and no psychopathology ("normality"). Rather, the psychopathology factors represent a specificity comparison. That is, the Internalizing Disorder factor, for instance, represents a comparison between the presence of internalizing psychopathology and the absence of internalizing psychopathology; thus, any control-related belief to which this factor is related represents an effect that is due to internalizing problems specifically, rather than to psychopathology in general.

Results

Overview of Analyses

A fully crossed 3 × 3 × 2 × 2 mixed factorial design, with age and gender as covariates,[3] was used in this study. The independent factors were (a) the Type of control-related belief (control, contingency, or competence), a within-subjects factor; (b) the domain that the control-related belief referred to (Academic, Behavioral, or Social), a within-subjects factor; (c) Internalizing Disorder (Yes or No), a between-subjects factor; and (d) Externalizing Disorder (Yes or No), a between-subjects factor. The dependent variables were the nine subscales of the control-related measures of children's perceptions of control, contingency, and competence in the academic, behavioral, and social domains.

Because the focus of this article was on psychopathology, only effects from this model involving the psychopathology factors (INT and EXT) were examined here (e.g., the main effect for Domain was not considered). The means and standard deviations of children's ratings of control-related beliefs as a function of the four factors in the model are presented in Table 3.

To describe significant interaction effects, we examined the next lower level of component interactions at each level of each of the component factors, controlling for age and gender. In turn, for each of these significant component interactions, we examined the next lower level of component interactions at each level of each of the factors, again controlling for age and gender. Finally, for each significant two-way component interaction, we examined the simple effects of each factor at each level of the other factor, controlling for age and gender.

This analysis of covariance with four factors revealed a significant four-way interaction (see below). Several lower order interactions involving two and three factors were also significant[4]; because these lower order effects all were qualified by the significant four-way interaction, they are not described further here. It is important to note that the main effects of Internalizing Disorder and of Externalizing Disorder were not significant, $F(1, 284) = 1.07, p > .10$, and $F(1, 284) = 1.72, p > .10$, respectively. That is, there were no differences overall in beliefs between children with and without an internalizing disorder; similarly, children with and without an externalizing disorder did not differ overall in their levels of beliefs.

[3] Analyses were conducted twice, once with age and gender as covariates, and a second time without controlling for these variables. The results of the two approaches were identical with respect to the significance of psychopathology-related effects.

[4] Lower order interactions involving the psychopathology factors that were significant included: (a) Type of Belief × Internalizing Disorder, $F(2, 568) = 3.06, p < .05$; (b) Domain × Externalizing Disorder, $F(2, 568) = 11.12, p < .0001$; (c) Type of Belief × Domain × Externalizing Disorder, $F(4, 1136) = 4.71, p < .01$; and (d) Domain × Internalizing Disorder × Externalizing Disorder, $F(2, 568) = 3.54, p < .05$. Details regarding these lower order effects are available from Susan S. Han.

Four-Way Interaction

The Type of Belief × Domain × Internalizing Disorder × Externalizing Disorder interaction was significant, $F(4, 1136) = 3.16$, $p < .05$. Four significant three-way component interactions yielded eight significant two-way component interactions (see Table 4) described below.

Interaction 1: Domain × Externalizing Disorder, for control beliefs for internalizers. The first 4 two-way component interactions involved differences in beliefs among children with an internalizing disorder. First, the Domain × Externalizing Disorder component interaction (see A1 in Table 4) was significant for internalizing children's perceptions of control. Examination revealed that the effect of externalizing disorder was significant only for the behavioral domain, $F(1, 142) = 6.58$, $p < .05$. Among internalizing children, those with an externalizing disorder rated lower levels of perceived control specifically in the behavioral domain than those without an externalizing disorder (see Table 3), but there were no differences in their beliefs for the academic or social domains.

Interaction 2: Domain × Externalizing Disorder, for competence beliefs for internalizers. Second, the Domain × Externalizing Disorder component interaction (see A2 in Table 4) was significant also for beliefs about competence among these same internalizing children. This interaction reflected contrasting patterns of beliefs for the behavioral versus social domains (see Figure 1). The significant effect of Externalizing Disorder in the behavioral domain, $F(1, 142) = 9.75$, $p < .01$, indicated that internalizing children with a concurrent externalizing disorder reported lower levels of perceived behavioral competence than internalizing children without a concurrent externalizing disorder (see Table 3). In contrast, the significant effect of Externalizing Disorder in the social domain, $F(1, 142) = 5.78$, $p < .05$, indicated that these same internalizing children with an externalizing disorder reported higher levels of perceived social competence than those without an externalizing disorder. Hence, among internalizing children, the comorbid presence of externalizing disorders was associated with lower levels of perceived behavioral competence but higher levels of perceived social competence, with no difference in competence beliefs for the academic domain.

Interaction 3: Type of Belief × Externalizing Disorder, for the behavioral domain for internalizers. Among internalizing children, the Type of Belief × Externalizing Disorder component interaction (see A3 in Table 4) was significant for the behavioral domain only. Examination of this effect produced the same simple effects as in Interactions 1 and 2: The effect of Externalizing Disorder was significant for beliefs about control, $F(1, 142) = 6.58$, $p < .05$, as well as for beliefs about competence, $F(1, 142) = 9.75$, $p < .01$, but not for beliefs about contingency. Internalizing children with an externalizing disorder endorsed lower levels of perceived control and competence in the behavioral domain than those without an externalizing disorder, but there was no difference in their beliefs about contingency (see Table 3).

Interaction 4: Type of Belief × Externalizing Disorder, for the social domain for internalizers. Among internalizing children, the Type of Belief × Externalizing Disorder component interaction (see A4 in Table 4) was also significant for the social domain but reflected a different pattern than that for the behavioral domain. Examination of this effect produced the same simple effect as in Interaction 2: Within the social domain, the effect of Externalizing Disorder was significant only for beliefs about competence, $F(1, 142) = 5.78$, $p < .05$, and ran in the opposite direction from that for the behavioral domain. Thus, internalizing children with an externalizing disorder endorsed higher levels of perceived competence in the social domain than those without an externalizing disorder, but there were no differences in their beliefs about control or contingency (see Table 3).

In sum, among children with an internalizing disorder, the comorbid presence of externalizing disorders was related to higher levels of perceived competence in the social domain but lower levels of perceived control and competence in the behavioral

Table 4
Significant Component Interactions Derived From Post Hoc Analysis of the Significant Four-Way Interaction, With Age and Gender as Covariates

Significant component interaction	Statistic
A For Yes-INT: Type of Belief × Domain × EXT	$F(4, 568) = 6.34$****
A1 For Yes-INT, control beliefs: Domain × EXT	$F(2, 284) = 6.33$**
A2 For Yes-INT, competence beliefs: Domain × EXT	$F(2, 284) = 11.05$****
A3 For Yes-INT, behavioral domain: Type of Belief × EXT	$F(2, 284) = 3.07$*
A4 For Yes-INT, social domain: Type of Belief × EXT	$F(2, 284) = 4.33$*
B For No-EXT: Type of Belief × Domain × INT	$F(4, 468) = 2.56$*
B1 For No-EXT, control beliefs: Domain × INT	$F(2, 234) = 3.16$*
B2 For No-EXT, competence beliefs: Domain × INT	$F(2, 234) = 4.29$*
B3 For No-EXT, social domain: Type of Belief × INT	$F(2, 234) = 5.23$**
C For competence beliefs: Domain × INT × EXT	$F(2, 568) = 4.40$*
C1 For competence beliefs in social domain: INT × EXT	$F(1, 284) = 4.18$*
C2 For Yes-INT, competence beliefs: Domain × EXT	See A2 above
C3 For No-EXT, competence beliefs: Domain × INT	See B2 above
D For social domain: Type of Belief × INT × EXT	$F(2, 568) = 3.59$*
D1 For competence beliefs in social domain: INT × EXT	See C1 above
D2 For Yes-INT, social domain: Type of Belief × EXT	See A4 above
D3 For No-EXT, social domain: Type of Belief × INT	See B3 above

Note. Type of Belief × Domain × INT (Internalizing Disorder) × EXT (Externalizing Disorder), $F(4, 1136) = 3.16$, $p < .02$.
* $p < .05$. ** $p < .01$. **** $p < .0001$.

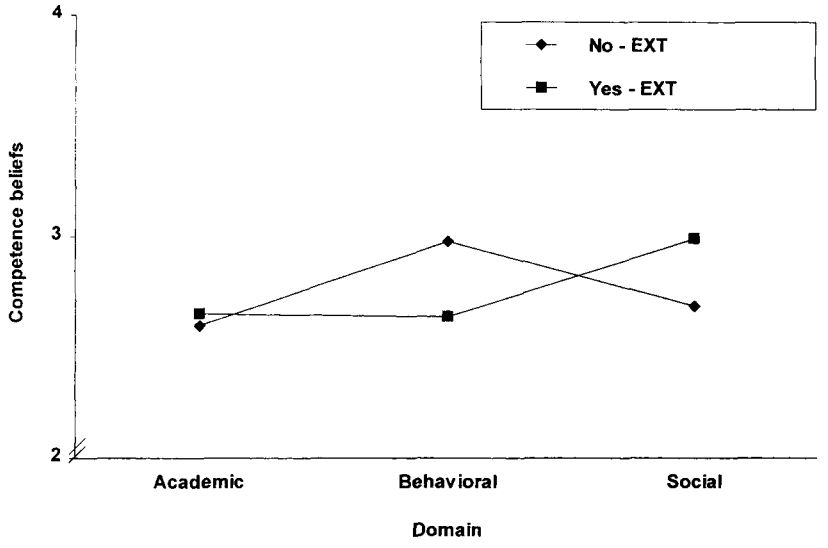

Figure 1. Competence beliefs among children with internalizing disorders, as a function of Externalizing Disorder (EXT) and Domain of Belief.

domain. Notably, among children without an internalizing disorder, there were no significant differences in control-related beliefs as a function of externalizing disorders. Moreover, for all domains, there was no difference in beliefs about contingency.

Interaction 5: Domain × Internalizing Disorder, for control beliefs for nonexternalizers. The next three 2-way component interactions reflected differences in beliefs among children without an externalizing disorder. The Domain × Internalizing Disorder component interaction (see B1 in Table 4) for children without an externalizing disorder was significant for beliefs about control. Examination revealed a marginally significant effect of Internalizing Disorder for the social domain only, $F(1, 117) = 3.69$, $p < .10$. Among children without an externalizing disorder, there was a trend for those with an internalizing disorder to endorse lower levels of perceived control in the social domain than those without an internalizing disorder (see Table 3).

Interaction 6: Domain × Internalizing Disorder, for competence beliefs for nonexternalizers. The Domain × Internalizing Disorder component interaction (see B2 in Table 4) for children without an externalizing disorder was significant also for beliefs about competence. Examination revealed that the effect of Internalizing Disorder was significant for the social domain only, $F(1, 117) = 5.49$, $p < .05$. Similar to the pattern reported above for control beliefs, nonexternalizing children with an internalizing disorder showed lower levels of perceived competence in the social domain than those without an internalizing disorder (see Table 3), but there were no differences in their competence beliefs for the academic and behavioral domains.

Interaction 7: Type of Belief × Internalizing Disorder, for the social domain for nonexternalizers. Examination of this interaction (see B3 in Table 4) produced the same simple effects as in Interactions 5 and 6: The effect of Internalizing Disorder within the social domain was marginally significant for beliefs about control, $F(1, 117) = 3.69$, $p < .10$, and significant for beliefs about competence, $F(1, 117) = 5.49$, $p < .05$. Among children without an externalizing disorder, those with an internalizing disorder showed marginally lower levels of perceived control and significantly lower levels of perceived competence in the social domain, compared with those without an internalizing disorder (see Table 3). Thus, within the social domain, lower levels of beliefs about competence (and, to some degree, beliefs about control, but not beliefs about contingency) appeared to be specifically linked to internalizing disorders—but only among children without an externalizing disorder. In contrast, there were no significant differences in control-related beliefs among children with an externalizing disorder.

Interaction 8: Internalizing Disorder × Externalizing Disorder, for social competence beliefs. Finally, the Internalizing Disorder × Externalizing Disorder component interaction (see C1 in Table 4) was significant, for beliefs about competence in the social domain. Examination of this interaction produced the same simple effects as in Interactions 2 and 6: The effect of Internalizing Disorder was significant for children without an externalizing disorder, $F(1, 117) = 5.49$, $p < .05$, but not for those with an externalizing disorder (see Figure 2). Among children without an externalizing disorder, those with an internalizing disorder endorsed lower levels of social competence beliefs than those without an internalizing disorder (see Table 3). In the other direction, the effect of Externalizing Disorder was significant only for children with an internalizing disorder, $F(1, 142) = 5.78$, $p < .05$, such that internalizing children with a concurrent externalizing disorder endorsed higher levels of social competence beliefs than those without an externalizing disorder. Hence, in the absence of externalizing disorders, the presence of internalizing disorders was associated with lower levels of perceived social competence; in the presence of internalizing disorders, the concurrent presence of externalizing disorders was associated with higher levels of perceived social competence.

Discussion

The primary goal of the present study was to investigate the specificity of the relation between control-related beliefs and internalizing and externalizing child psychopathology. On the basis

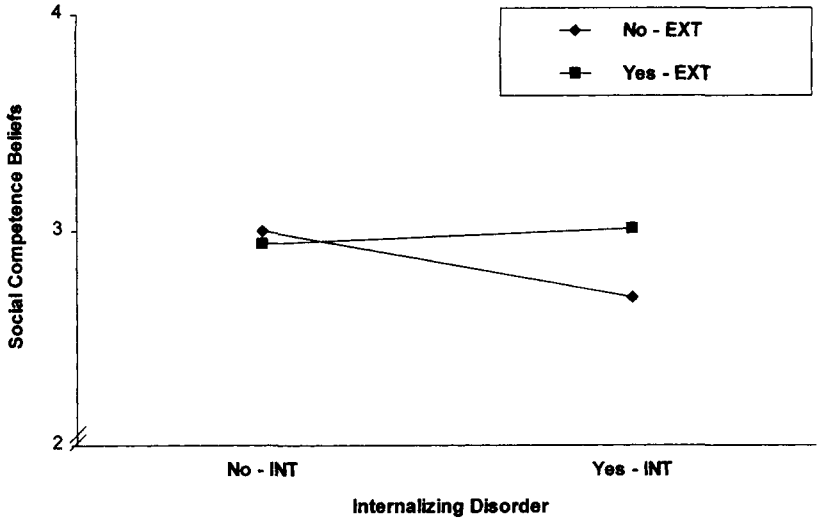

Figure 2. Competence beliefs about the social domain, as a function of Internalizing Disorder (INT) and Externalizing Disorder (EXT).

of multiple factors, our findings do indicate that children's control-related beliefs have specific relations with internalizing and externalizing psychopathology, but these relations are more complex than previously reported. First, beliefs about control and competence—but not beliefs about contingency—showed specific relations to internalizing and externalizing psychopathology. Second, beliefs about the behavioral and social—but not the academic—domains showed specific relations to psychopathology. Third, internalizing and externalizing psychopathology showed an interactive effect on children's beliefs, such that children with different forms of psychopathology showed different patterns of beliefs, especially regarding the behavioral and social domains. Our significant four-way interaction indicated that the dimensions (type and domain) of control-related beliefs and forms of psychopathology need to be considered simultaneously in order to describe these relations accurately.

Before considering our results, it is important to note several methodological dimensions along which the present study differed from previous investigations in this area. First, we assessed control-related beliefs using a multidimensional approach that differentiated the type of control-related belief as well as the domain that the beliefs referred to. Second, unlike previous studies that have focused on one specific form of childhood psychopathology, we assessed both internalizing and externalizing psychopathology, which allowed us to directly assess the effect of their interaction. Third, in contrast to child self-reports typically used in previous studies, in the present study we used parent-report *DSM–III–R* diagnoses, thus reducing the risk that findings might be inordinately influenced by shared method variance across the measures. Finally, the use of a diagnostically heterogeneous clinic-referred sample allowed us to examine effects that were specific to internalizing and externalizing psychopathology rather than to psychopathology in general.

The first major finding concerns the specificity of relations between psychopathology and the different types of control-related beliefs examined. Whereas beliefs about control and competence showed specific relations to internalizing and externalizing psychopathology, beliefs about contingency did not differ among our participants as a function of their psychopathology. Similar findings have been reported in earlier studies that used the contingency–competence–control model. In these studies, inpatient and outpatient children's self-reports of depressive symptomatology (the only problem area examined by these prior studies) were found to be related to beliefs about control and competence but not consistently to beliefs about contingency (Weisz et al., 1987, 1989). The similarity in findings between these studies and the present study is particularly noteworthy, given that the earlier studies used different measures of psychopathology and control-related beliefs than those used in the present study. However, in a subsequent study with a general school sample (Weisz, Sweeney, Proffitt, & Carr, 1993), somewhat different results were found; beliefs about contingency—as well as competence and control—were related to depressive symptomatology. This set of findings suggests that nonreferred and clinic-referred children's beliefs about contingency may have different relations with psychopathology.

It is possible that this lack of relation between contingency beliefs and psychopathology in our clinic-referred sample is due at least in part to the way in which adults and children focus on children's behavior and achievement. Children are praised and rewarded (as well as punished) for the personal aspects of their behavior (e.g., their competence and control over their behavior)—but not for the contingency of their environment, which is largely determined by other individuals (such as parents, teachers, and peers). Consequently, the salience of environmental contingencies in children's experience of control may be reduced, in comparison with their focus on their personal competencies and abilities, particularly for children who are having behavioral or emotional problems. Children might thus be more likely to attribute their successes and failures to personal strengths and inadequacies (i.e., high or low personal competence) rather than to a possible lack (or low level) of contingency in the environment. Thus, perceptions of control and competence may be more pertinent to children's self-

concept and their problems and may also be more pathogenic (e.g., Tangney, Burggraf, & Wagner, 1995).

One factor that may distinguish both perceptions of control and of competence from contingency is the self-evaluative nature of the former types of beliefs. That is, judgments of control and competence entail an evaluation of oneself and represent fundamental self-perceptions of one's abilities and capacities; this aspect may partly account for their relation to psychopathology. Although beliefs about contingency likely derive in part from personal experiences of contingencies in one's environment as well as from observations of other people, they are explicitly distinct from appraisals of one's personal attributes or behaviors. As such, contingency beliefs do not directly reflect beliefs about one's worth or capacity, and so may be less likely to relate to psychopathology. Thus, it may be a distinction between control-related beliefs about the self versus those about the environment that accounts for the different relations with psychopathology.[5]

Our lack of an effect for contingency, however, should not be interpreted to mean that contingency is an unimportant dimension of control. Rather, our findings highlight that contingency beliefs may not have specific relations with internalizing and externalizing psychopathology, at least among clinic-referred children, the large majority of whom are experiencing serious behavioral and emotional problems. It is also possible that the relatively low internal consistency of contingency beliefs for the social domain may have reduced the power to find an effect for contingency; however, it should be noted that no specific effects with internalizing and externalizing psychopathology were found for contingency beliefs about either the academic or behavioral domains (both of which had higher internal consistency alphas).

A second major finding of our study was that the relation between control-related beliefs and psychopathology varied also as a function of the domain of the beliefs. Whereas control-related beliefs about the behavioral and social domains were related to internalizing and externalizing psychopathology, beliefs about the academic domain were not. This may seem somewhat surprising, given the well-established link between academic underachievement and child psychopathology, particularly externalizing psychopathology (e.g., Hinshaw, 1992). However, it is important to remember that our design and analyses were structured to assess relations that were specific to internalizing and externalizing psychopathology. Thus, it may be that there are not specific relations with internalizing or externalizing psychopathology but that psychopathology in general may be associated with relatively low levels of control-related beliefs in the academic domain.

It is also possible that internalizing and externalizing psychopathology may have specific relations with objective measures of academic functioning (e.g., grades) but not with subjective self-report measures of control-related beliefs. The majority of studies that have investigated the relation between psychopathology and academic-related variables have focused on objective performance measures (e.g., Fergusson & Lynskey, 1998). In contrast, in the present study we focused on children's perceptions of their competence and control over academic outcomes. It is possible that cognitive biases associated with psychopathology prevent children from accurately perceiving their academic functioning, thus obscuring the relation between psychopathology and actual academic performance (see e.g., Compas, Phares, Banez, & Howell, 1991; Evans et al., 1995; Hoza, Pelham, Milich, Pillow, & McBride, 1993).

The third major aspect of our findings involved the interaction between internalizing and externalizing psychopathology. These two forms of psychopathology showed an interactive relation to different patterns of beliefs in the behavioral and social domains. Consequently, we should note the lack of main effects for psychopathology, which is somewhat surprising given previous findings of a main effect relation between perceived control and depressive symptomatology in particular (e.g., Weisz et al., 1987, 1989, 1993). However, previous studies that used the contingency–competence–control model did not simultaneously investigate both forms of broad-band psychopathology; therefore, an unassessed (and hence untested) interaction between internalizing and externalizing psychopathology may have qualified the main effects reported in previous studies. In addition, these previous studies primarily used self-reports (rather than parent reports) of child psychopathology, which may have artificially strengthened the main effects relations between beliefs and psychopathology through shared method variance.

The interaction between internalizing and externalizing psychopathology indicates that the relation between psychopathology and control-related beliefs differs as a function of the domain, for the behavioral and social domains. With regard to the behavioral domain, we found that externalizing psychopathology was related to lower levels of perceived control and competence in the behavioral domain—but only among children with internalizing psychopathology. Given that externalizing psychopathology is defined by behavioral problems that in many instances represent a failure of control (e.g., Dodge & Schwartz, 1997), it is not surprising that children experiencing externalizing problems perceived themselves to have relatively lower levels of control and of competence in the behavioral domain. Although externalizing children often have been thought to lack an introspective focus and to tend to overestimate their abilities (e.g., Hoza et al., 1993), our findings suggest that a subset of externalizers—those with comorbid internalizing disorders—may be introspective enough to be somewhat aware of their deficits pertaining to behavioral control and competence.

These comorbid children's depressive or anxious affect (or both), possibly in conjunction with a negative schematic framework, may influence their evaluation of their externalizing behavior by drawing their focus inward to their personal inadequacies. This increased focus may lead them to evaluate their externalizing behaviors in a negative manner and to blame themselves (i.e., their low competence) for their misbehavior; in turn, they may perceive themselves to possess little ability and capacity (competence and

[5] The distinction between the "personal" versus "universal" aspects of control has also been noted by other theorists (e.g., Skinner, 1995; Bandura, 1977; Abramson et al., 1978). For example, Abramson et al. (1978), in a reformulated theory of learned helplessness, differentiated personal helplessness and universal helplessness, with the former resulting from the perception that no behavior in the individual's repertoire of competencies can produce the desired outcome and the latter developing from the perception that a desired outcome is not contingent on any behavior in the repertoire of any relevant individual (including oneself). Despite some conceptual overlap, these constructs are different from competence and contingency, in that personal and universal helplessness describe potential reactions to the loss of subjective or objective control, whereas competence and contingency refer to factors in the person and environment that influence the controllability of events and outcomes.

control) to stay out of trouble. Thus, the interaction between internalizing and externalizing psychopathology may result from these cognitive mechanisms by which comorbid children evaluate themselves, particularly with respect to their competence and capacity to control pertinent outcomes in the behavioral domain.

Alternatively, the causal pathway may operate in the other direction, with control-related beliefs influencing the development of specific forms of psychopathology. For example, it is possible that children who experience externalizing problems and interpret these problems to mean that they have little control over their behavior may become depressed and anxious; in contrast, children who experience externalizing problems but do not view these problems as indicative of a lack of personal control may be less likely to become depressed and anxious (Patterson & Stoolmiller, 1991). Such a causal sequence could also result in our four-way interaction.

With regard to children's beliefs about the social domain, we found that internalizing psychopathology was also associated with lower levels of self-reported competence (and, to some extent, control) in the social domain. This finding is not surprising, given that a number of studies have shown that depressed and anxious children tend to experience various failures in the social domain, such as being rejected or ignored by their peers (e.g., Altmann & Gotlib, 1988; Chansky & Kendall, 1997; Cole & Carpentieri, 1990; Kennedy, Spence, & Hensley, 1989; Rubin & Mills, 1988; Strauss, 1988). However, this effect for the social domain was evident only in the absence of concurrent externalizing psychopathology. In fact, the concurrent presence of externalizing psychopathology among children with internalizing psychopathology was actually associated with higher levels of perceived control and competence in the social domain. These findings suggest that the presence of externalizing psychopathology may mitigate the specific negative relation between internalizing psychopathology and control-related beliefs in the social domain.

There are several possible mechanisms by which these effects may occur. First, relative to internalizing-only children, comorbid children's aggressive and oppositional behaviors may lead them to have more frequent interactions with their peers, thus providing them with more social opportunities through which they may develop their self-perceptions of being socially engaged and competent. Second, the reference group on which these comorbid children base their perceptions may differ from that for the internalizing-only children. Although rejected by normative peers, comorbid children may be accepted by a deviant peer group of other acting-out children who provide these comorbid children with opportunities for peer acceptance (e.g., Dishion, Patterson, & Griesler, 1994).

Finally, it is possible that externalizing problems may have a self-enhancing effect on control-related perceptions, through a lack of self-awareness of one's negative effect on others in the social realm. That is, the deficits in social information processing that are characteristic of children with externalizing problems (e.g., Crick & Dodge, 1994) may lead such children to selectively attend to and misinterpret social cues. Although they might infer hostile intentions from their peers' ambiguous behaviors, they may not comprehend their own role in problematic interpersonal interactions and thus may view their social skills in an unduly positive light (e.g., Asher & Coie, 1990; Hymel, Rubin, Rowden, & LeMare, 1990; Whalen & Henker, 1985).

At the broadest level of interpretation, our significant four-way interaction indicates that the relation between control-related beliefs and internalizing and externalizing child psychopathology is more specific than previously reported. Our findings highlight the necessity for investigators to (a) evaluate both internalizing and externalizing forms of psychopathology, (b) treat control as a multidimensional construct, and (c) distinguish among separate domains of functioning. Otherwise, an incomplete and misleading picture of the relation between psychopathology and control-related beliefs may emerge. The importance of considering multiple dimensions is underscored by our failure to find significant main effects on control-related beliefs for either internalizing or externalizing psychopathology.

Several caveats should be considered along with our findings. First, it is important to note that in this study, children's perceptions of control-related phenomena were assessed, and thus the relations we found here may or may not pertain to children's actual abilities to control their environment. Some evidence suggests that children's perceptions of control and competence are related to their actual abilities (at least within the social domain; e.g., Altmann & Gotlib, 1988), whereas other evidence suggests that children may underestimate (e.g., Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998) or overestimate (e.g., Hoza et al., 1993) their actual abilities. However, our finding that control-related beliefs have specific relations to internalizing and externalizing psychopathology indicates that these beliefs are important regardless of their objective validity. However, the implications of the relations observed in this study likely will differ depending on the extent to which these beliefs are accurate or represent different biases. If these beliefs represent a distortion, either in a negative or in a self-enhancing direction, they may interfere with adaptive functioning via different causal processes than if the control-related beliefs represent accurate appraisals. For instance, a child who erroneously believes that she or he does not possess the capacity to control an event may become passive and withdrawn, unlikely to attempt to control an event that she or he actually could control. Conversely, if a child believes that she or he has more control or is more competent than is actually the case, then the child may alienate peers with her or his misguided attempts at control and may fail to integrate helpful feedback for improving his or her control and capacity to obtain desired outcomes.

Second, our data do not address the direction of causality between psychopathology and control-related beliefs. Thus, it is unclear whether (a) internalizing and externalizing psychopathology are causes of control-related beliefs, (b) control-related beliefs are a cause of these psychopathologies, or (c) a third variable (e.g., a biological vulnerability) is responsible for causing these psychopathologies as well as control-related beliefs. However, a relation between control-related beliefs and psychopathology has important implications, regardless of the direction of causality. If certain control-related beliefs are part of a specific causal pathway leading to internalizing or externalizing psychopathology in children, then delineating the specific mechanisms (e.g., whether they represent a distortion or are accurate) will be an important step in understanding the development of these problems. However, if control-related beliefs are not a cause of specific forms of psychopathology, understanding their relation to psychopathology is important nonetheless, because these beliefs themselves may exert an important influence on children's adaptive, goal-directed behavior. That is, the belief that one has little control over one's environment may

result in reduced initiative, effort, and persistence in goal-directed behavior (e.g., Lefcourt, 1976; Rotter, 1966; Skinner, 1995).

An important step in this research will be to determine whether the relations we have found with control-related perceptions also apply to objective measures of environmental contingencies and to children's competencies and control in various domains of functioning. In addition, it will be critical to understand the direction of causality between psychopathology and control-related beliefs. Given the complexity and multidimensionality of our results, there very well may be bidirectional relations between psychopathology and control-related beliefs.

References

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96,* 358–372.

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87,* 49–74.

Altmann, E. O., & Gotlib, I. H. (1988). The social behavior of depressed children: An observational study. *Journal of Abnormal Child Psychology, 16,* 29–44.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.

Asher, S. R., & Coie, J. D. (1990). *Peer rejection in childhood.* New York: Cambridge University Press.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191–215.

Bandura, A., Adams, N. E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. *Journal of Personality and Social Psychology, 35,* 125–139.

Berkowitz, L. (1989). Frustration–aggression hypothesis: Examination and reformulation. *Psychological Bulletin, 106,* 59–73.

Brown, J. D., & Siegel, J. M. (1988). Attributions for negative life events and depression: The role of perceived control. *Journal of Personality and Social Psychology, 54,* 316–322.

Chansky, T., & Kendall, P. (1997). Social expectancies and self-perceptions in anxiety-disordered children. *Journal of Anxiety Disorders, 11,* 347–363.

Cicchetti, D., & Toth, S. L. (1991). A developmental perspective on internalizing and externalizing disorders. In D. Cicchetti & S. L. Toth (Eds.), *Internalizing and externalizing expressions of dysfunction: Rochester symposium on developmental psychopathology* (pp. 1–20). Hillsdale, NJ: Erlbaum.

Cole, D. A., & Carpentieri, S. (1990). Social status and the comorbidity of child depression and conduct disorder. *Journal of Consulting and Clinical Psychology, 58,* 748–757.

Cole, D. A., Martin, J. M., Peeke, L. G., Seroczynski, A. D., & Hoffman, K. (1998). Are cognitive errors of underestimation predictive or reflective of depressive symptoms in children: A longitudinal study. *Journal of Abnormal Psychology, 107,* 481–496.

Compas, B. E., Phares, V., Banez, G. A., & Howell, D. C. (1991). Correlates of internalizing and externalizing behavior problems: Perceived competence, causal attributions, and parental symptoms. *Journal of Abnormal Child Psychology, 19,* 197–218.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115,* 74–101.

Dishion, T. J., Patterson, G. R., & Griesler, P. C. (1994). Peer adaptations in the development of antisocial behavior: A confluence model. In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 61–95). New York: Plenum Press.

Dodge, K. A., & Schwartz, D. (1997). Social information processing mechanisms in aggressive behavior. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 171–180). New York: Wiley.

Evans, D. W., Brody, L., & Noam, G. G. (1995). Self-perceptions of adolescents with and without mood disorder: Content and structure. *Journal of Child Psychology and Psychiatry, 36,* 1337–1351.

Fergusson, D. M., & Lynskey, M. T. (1998). Conduct problems in childhood and psychosocial outcomes in young adulthood: A prospective study. *Journal of Emotional and Behavioral Disorders, 6,* 2–18.

Findley, M. J., & Cooper, H. M. (1983). Locus of control and academic achievement: A literature review. *Journal of Personality and Social Psychology, 44,* 419–427.

Fisher, P. W., Shaffer, D., Piacentini, J. C., Lapkin, J., Kafantaris, V., Leonard, H., & Herzog, D. B. (1993). Sensitivity of the Diagnostic Interview Schedule for Children, 2nd Edition (DISC–2.1) for specific diagnoses of children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 32,* 666–673.

Fisher, P., Wicks, J., Shaffer, D., Piacentini, J., & Lapkin, J. (1992). *NIMH Diagnostic Interview Schedule for Children, Version 2.3. user's manual.* New York: New York State Psychiatric Institute.

Garber, J., & Hollon, S. D. (1991). What can specificity designs say about causality in psychopathology research? *Psychological Bulletin, 110,* 129–136.

Harter, S. (1982). The Perceived Competence Scale for Children. *Child Development, 53,* 87–97.

Harter, S. (1985). *Manual for the Self-Perception Profile for Children.* Denver, CO: University of Denver.

Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin, 111,* 127–155.

Hoza, B., Pelham, W. E., Milich, R., Pillow, D., & McBride, K. (1993). The self-perceptions and attributions of attention deficit hyperactivity disordered and nonreferred boys. *Journal of Abnormal Child Psychology, 21,* 271–286.

Hymel, S., Rubin, K. H., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal predictors of internalizing and externalizing problems from middle to late childhood. *Child Development, 61,* 2004–2021.

Jensen, P. S., Watanabe, H. K., Richters, J. E., Roper, M., Hibbs, E. D., Salzberg, A. D., & Liu, S. (1996). Scales, diagnoses, and child psychopathology: II. Comparing the CBCL and the DISC against external validators. *Journal of Abnormal Child Psychology, 24,* 151–168.

Kennedy, E., Spence, S. H., & Hensley, R. (1989). An examination of the relationship between childhood depression and social competence amongst primary school children. *Journal of Child Psychology and Psychiatry, 30,* 561–573.

Lefcourt, H. M. (1976). *Locus of control: Current trends in theory and research.* Hillsdale, NJ: Erlbaum.

Linn, R. T., & Hodge, G. K. (1982). Locus of control in childhood hyperactivity. *Journal of Consulting and Clinical Psychology, 50,* 592–593.

McCauley, E., Mitchell, J. R., Burke, P., & Moss, S. (1988). Cognitive attributes of depression in children and adolescents. *Journal of Consulting and Clinical Psychology, 56,* 903–908.

Nolen-Hoeksema, S., Girgus, J. S., & Seligman, M. E. P. (1986). Learned helplessness in children: A longitudinal study of depression, achievement, and explanatory style. *Journal of Personality and Social Psychology, 51,* 435–442.

Ollendick, D. G. (1979). Locus of control and anxiety as mediating variables of locus of conflict in disadvantaged youth. *Journal of Psychology, 101,* 23–25.

Patterson, G. R., & Stoolmiller, M. (1991). Replications of a dual failure model for boys' depressed mood. *Journal of Consulting and Clinical Psychology, 59,* 491–498.

Piacentini, J., Shaffer, D., Fisher, P., Schwab-Stone, M., Davies, M., &

Gioia, P. (1993). The Diagnostic Interview Schedule for Children—Revised Version (DISC–R): III. Concurrent criterion validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 32,* 658–665.

Quay, H. C., & Werry, J. S. (1986). *Psychopathological disorders of childhood* (3rd ed.). New York: Wiley.

Rawson, H. E. (1992). The interrelationship of measures of manifest anxiety, self-esteem, locus of control, and depression in children with behavior problems. *Journal of Psychoeducational Assessment, 10,* 319–329.

Rothbaum, F., Wolfer, J., & Visintainer, M. (1979). Coping behavior and locus of control in children. *Journal of Personality, 47,* 118–135.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1, Whole No. 609), 1–28.

Rubin, K. H., & Mills, R. S. L. (1988). The many faces of social isolation in childhood. *Journal of Consulting and Clinical Psychology, 56,* 916–924.

Schwab-Stone, M., Fisher, P., Piacentini, J., Shaffer, D., Davies, M., & Briggs, M. (1993). The Diagnostic Interview Schedule for Children—Revised Version (DISC–R): II. Test-retest reliability. *Journal of the American Academy of Child and Adolescent Psychiatry, 32,* 651–657.

Schwab-Stone, M. E., Shaffer, D., Dulcan, M. K., Jensen, P. S., Fisher, P., Bird, H. R., Goodman, S. H., Lahey, B. B., Lichtman, J. H., Canino, G., Rubio-Stipec, M., & Rae, D. S. (1996). Criterion validity of the NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC–2.3). *Journal of the American Academy of Child and Adolescent Psychiatry, 35,* 878–888.

Seligman, M. E. P., Peterson, C., Kaslow, N. J., Tannenbaum, R. L., Alloy, L. B., & Abramson, L. Y. (1984). Attributional style and depressive symptoms among children. *Journal of Abnormal Psychology, 93,* 235–238.

Siegel, L. J., & Griffin, N. J. (1984). Correlates of depressive symptoms in adolescents. *Journal of Youth and Adolescence, 13,* 475–487.

Skinner, E. A. (1995). *Perceived control, motivation, and coping.* Thousand Oaks, CA: Sage.

Skinner, E. A., Chapman, M., & Baltes, P. B. (1988a). Children's beliefs about control, means–ends, and agency: Developmental differences during middle childhood. *International Journal of Behavioral Development, 11,* 369–388.

Skinner, E. A., Chapman, M., & Baltes, P. B. (1988b). Control, means–ends, and agency beliefs: A new conceptualization and its measurement during childhood. *Journal of Personality and Social Psychology, 54,* 117–133.

Strauss, C. C. (1988). Social deficits of children with internalizing disorders. In B. B. Lahey & A. E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 11, pp. 159–191). New York: Plenum Press.

Tangney, J. P., Burggraf, S. A., & Wagner, P. E. (1995). Shame-proneness, guilt-proneness, and psychological symptoms. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 343–367). New York: Guilford Press.

Weigel, C., Wertlieb, D., & Feldstein, M. (1989). Perceptions of control, competence, and contingency as influences on the stress-behavior symptom relation in school-age children. *Journal of Personality and Social Psychology, 56,* 456–464.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92,* 548–573.

Weiner, B., Heckhausen, H., Meyer, W., & Cook, R. E. (1972). Causal ascriptions and achievement behavior: A conceptual analysis of effort and reanalysis of locus of control. *Journal of Personality and Social Psychology, 21,* 239–248.

Weiss, B., Süsser, K., & Catron, T. (1998). Common and specific factors in childhood psychopathology. *Journal of Abnormal Psychology, 107,* 118–127.

Weisz, J. R. (1984). Contingency judgments and achievement behavior: Deciding what is controllable and when to try. *Advances in Motivation and Achievement, 3,* 107–136.

Weisz, J. R. (1986a). Contingency and control beliefs as predictors of psychotherapy outcomes among children and adolescents. *Journal of Consulting and Clinical Psychology, 54,* 789–795.

Weisz, J. R. (1986b). Understanding the developing understanding of control. In M. Perlmutter (Ed.), *Cognitive perspectives on children's social and behavioral development: Minnesota symposia on child psychology* (Vol. 18, pp. 219–278). Hillsdale, NJ: Erlbaum.

Weisz, J. R. (1990). Development of control-related beliefs, goals, and styles in childhood and adolescence: A clinical perspective. In J. Rodin, C. Schooler, & K. W. Schaie (Eds.), *Self-directedness: Cause and effects throughout the life course* (pp. 103–145). Hillsdale, NJ: Erlbaum.

Weisz, J. R. (1991). *The Perceived Control Scale for Children.* Los Angeles: University of California, Los Angeles.

Weisz, J. R., Proffitt, V., & Sweeney, L. (1991). *The Perceived Contingency Scale for Children: Development and validation.* Unpublished manuscript, University of California, Los Angeles.

Weisz, J. R., Stevens, J. S., Curry, J. F., Cohen, R., Craighead, E., Burlingame, W. V., Smith, A., Weiss, B., & Parmelee, D. X. (1989). Control-related cognitions and depression among inpatient children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 28,* 358–363.

Weisz, J. R., & Stipek, D. J. (1982). Competence, contingency, and the development of perceived control. *Human Development, 25,* 250–281.

Weisz, J. R., Sweeney, L., Proffitt, V., & Carr, T. (1993). Control-related beliefs and self-reported depressive symptoms in late childhood. *Journal of Abnormal Psychology, 102,* 411–418.

Weisz, J. R., Weiss, B., Wasserman, A. A., & Rintoul, B. (1987). Control-related beliefs and depression among clinic-referred children and adolescents. *Journal of Abnormal Psychology, 96,* 58–63.

Whalen, C. K., & Henker, B. (1985). The social worlds of hyperactive (ADDH) children. *Clinical Psychology Review, 5,* 447–478.

Received September 21, 1999
Revision received August 23, 2000
Accepted August 30, 2000 ■