DEVELOPMENT IN CHILDREN'S CONCEPTIONS OF MENTAL ILLNESS: RELATIONS TO SOCIAL PERSPECTIVE COORDINATION AND EMOTIONAL UNDERSTANDING

by

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Abstract

The present study provided a first step in the integration of our efforts to understand more clearly children's conceptions of mental illness. Gender and age changes in conceptions of mental illness (i.e., recognition of adaptive functioning, estimations of positive prognosis, attributions of causality, and attitudes toward peers with mental illness) were examined in relation to social perspective coordination and emotional understanding to determine whether children's conceptions are associated with concomitant levels of development in these constructs. Further, these social cognitive constructs were explored as potential mechanisms underlying children's conceptions of psychopathology to determine their relative influence in predicting dimensions of mental illness conceptions. To this end, 160 children across grades one, four, and seven were read a series of mental illness vignettes and were administered measures assessing their conceptions of mental illness, perspective taking skills, emotional understanding, and receptive verbal ability. The results generally revealed significant increases across grades in both social perspective coordination and emotional understanding and significant decreases in the positive beliefs of mental illness composite score. Children's attributions of causality for mental illness were also shown to be associated with changes in social perspective coordination and emotional development. Moreover, a generally consistent age-related increase in the use of psychological illness attributions of causality and an age-related decrease in the use of physical/biological explanations across different types of disorders were revealed. Finally, the results demonstrated that all children perceived the conduct-disordered vignette character as the most severe and least likeable character with a poorer long-term prognosis. This finding suggests that regardless of age, participants perceive antisocial behavior as most demonstrative of mental illness in terms of severity, prognosis, and likeability. Theoretical and practical implications of these findings are discussed in terms of the strengths and limitations of the present study and suggestions for future research.
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Introduction

It has long been recognized by researchers and amateur observers of human behavior alike that "some social processes are important not because they are frequent occurrences in everyday life, but because they serve as a frame of reference for the conduct of daily life" (Coie & Pennington, 1976, p. 407). The attribution of psychological disorder is one such process. In our society, psychological disorder is frequently misconceived to imply a shameful, depraved weakness or frailty of character. To consider another person as "mentally ill" is to raise fundamental questions about that person's status as a worthy human being (Coie & Pennington, 1976). For example, in one early investigation on adult attitudes toward mental illness, Nunnally (1961) confirmed that a strong "negative halo" exists around people who are mentally ill and that, almost without exception, mental illness is regarded as "all things bad." Nunnally also noted that the media supported these conceptions by dramatizing and emphasizing the bizarre symptoms of mental illness and oversimplifying causes and treatments. Moreover, his research suggested that mental health topics generate public anxiety and that, though correctness of information about mental illness correlates positively with increased age and education, attitudes toward people with mental illness remain negative across the lifespan.

Although the concept of mental illness has certainly changed and broadened in past decades due to unprecedented knowledge about the brain and human behavior (Phelan, Link, Stueve, & Pescosolido, 2000; U.S. Department of Health and Human Services, 1999), research reveals that attitudes toward those with mental illness have not (James, 1998; Corrigan & Penn, 1999; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999; Phelan et al., 2000; Socall & Holtgraves, 1992; Wahl, 1999). Indeed, perceptions of people with mental illness as violent and frightening have substantially increased in recent years (Phelan et al., 2000; Socall & Holtgraves, 1992) and as such, the public continues to view people with mental illness as "objectionable, dangerous, and largely unpredictable" (Segal, 1978, p. 215)
Despite the stigma that is clearly attached to persons with mental illness by adults in our society, less is known about children's conceptions of and attitudes toward mental illness. Considering the long-standing and sizable research interest in children's social perception and cognition (see Flavell, Miller, & Miller, 2002; Hughes & Dunn, 1998; Shantz, 1983), the contention that adult stereotypes of mental illness are learned in childhood (Bar-Tal, 1996; Maas, Marecek, & Travers, 1978; Scheff, 1984), and the overall prevalence of psychological disorders evident in children (Bird, 1996; Mash & Wolfe, 2002; U.S. Department of Health and Human Services, 1999), this paucity of research is surprising. Certainly, the majority of investigations examining the prevalence of psychological dysfunction suggest that psychopathology in children is a common occurrence (Mash & Wolfe, 2002). Overall estimates of emotional, behavioral, and developmental disorders range from 14% to 22% (American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders-IV-TR, 2000; Brandenburg, Friedman, & Silver, 1990; Consortium on the School-based Promotion of Social Competence, 1994), with more severe forms of mental disturbance estimated to occur in approximately 8% to 10% of all children (Costello, 1989; DSM-IV-TR, 2000; Miller, Brehm, & Whitehouse, 1998; Offord et al., 1987). On a global scale, mental illness is the second leading cause of disability and premature mortality, and accounts for more than 15% of the overall burden of disease from all causes (see Murray & Lopez, 1996).

Although these considerations are important in their own right, developing a knowledge base that encompasses children's understanding of psychopathology is relevant for several additional reasons. At a practical level, children's conceptions have implications both for themselves and for others with whom they interact (Kazdin, Greist, & Esveldt-Dawson, 1984). For example, research suggests that notions about the nature of psychological problems have direct implications on a child's willingness to acknowledge various forms of dysfunction and to engage in ameliorative treatment (Dollinger, Thelen, & Walsh, 1980; Kazdin et al., 1984;
Moreover, the recognition and acknowledgement of psychopathology often relies on the availability of information and support, and understanding children's conceptions of mental illness will provide valuable information in this respect (Seeker, Armstrong, & Hill, 1999). It is therefore crucial to consider children's perspectives and use explanations consistent with their developmental stages if we are to provide appropriate information and design effective interventions for disturbed children. As noted over two decades ago by Marsden and Kalter (1976), "Interventions...can be enhanced by knowledge, keyed to our understanding of general psychological development, of children's capacity to understand disturbed behavior" (p. 228).

At a theoretical level, the understanding of children's conceptions of psychopathology has relevance within the broader framework of developmental psychology. Given that a child's beliefs about the causes of behavior most certainly influence his or her own dispositions, traits, and patterns of interaction, the understanding of disordered behavior is a revealing case of social attribution that demonstrates how individuals respond to the actions of others (Kazdin et al., 1984; Maas et al., 1978). Further, the ways in which children's conceptions develop and the mechanisms underlying their emergence have important implications for social understanding and social competence (Bosacki & Astington, 1999; Heyman & Gelman, 2000). An understanding of such beliefs is therefore an important theoretical task that bridges the gap between the social-cognitive and -emotional domains of developmental psychology.

Despite these practical and theoretical rationales, a review of the extant research reveals that our understanding of children's perspectives on psychopathology is at an early stage of development (Secker et al., 1999). Indeed, at present we have only a limited appreciation of children's nascent understanding of mental illness. Although a body of clinically focused research has explored children's beliefs about emotional and mental well being (e.g., Gordon & Grant, 1997; Mayall, 1993) and revealed age changes in children's conceptions of
psychopathology (e.g., Chassin & Coughlin, 1983; Dollinger et al., 1980; Marsden, Kalter, Plunkett, & Barr-Grossman, 1977; Kazdin et al., 1984; Novak, 1974; Spitzer & Cameron, 1995), such research has generally assumed an “atheoretical” approach with children’s conceptions rarely being examined from within a developmental framework (Bibace & Walsh, 1981). Such an approach says little about how or why children’s conceptions change and fails to illustrate what developmental constructs underlie such changes. Further, although research has recently begun to focus on individual differences and various social-cognitive aspects of children’s understanding of mental life (Dunn, 1999; Harris, 1999), few studies have examined the mechanisms or processes that underlie children’s conceptions of mental illness specifically, or the potential influence these mechanisms may have on the developmental trajectory of this phenomenon. This investigation therefore provides a first step in the integration of our efforts to understand more clearly children’s conceptions of mental illness.

This study aimed to enhance the literature on children’s conceptions of mental illness in two ways. First, age changes in conceptions of mental illness were linked to established indices of social-cognitive development, those of social perspective coordination and emotional understanding, to determine whether children’s conceptions of mental illness are associated with concomitant levels of development in these constructs. A second aim of this research was to explore the relative influence of both social perspective coordination and emotional understanding as mechanisms underlying children’s conceptions of psychopathology to determine singularly and collectively the potential influence of these constructs in predicting maturity in mental illness concepts.

In order to provide the developmental framework that guided this research, this thesis begins with a brief outline of Selman’s early work on perspective taking and its contribution to the development of social perspective coordination. Following is a summary of research on the development of emotional understanding. The introduction concludes with a brief discussion on
the conceptual and theoretical rationales for the selection of social perspective coordination and emotional understanding as mechanisms contributing to children’s conception of mental illness.

**Perspective Taking and the Development of Social Perspective Coordination**

Piaget was a proponent of the science of developmental epistemology. As such, he believed that the best way to understand the essential nature of the conception of a phenomenon was to follow and describe changes in children’s understanding of the phenomenon as they, the children, matured (Selman et al., 1997). Piaget’s adherence to developmental epistemology served as the forerunner to a distinct approach for studying social cognition and the child’s conception of the social world – the structural-developmental approach (Selman, 1971). This approach refers to a set of assumptions and research methodologies common to a number of theories of social-cognitive development, the hallmark of which is the suggestion that social reasoning develops through an invariant sequence of stages (Selman, 1980). This approach is not concerned with the content or the accuracy of thought, but instead with the form or *structure* in which a child’s conceptions of a phenomenon emerge (Selman, 1980; Selman & Byrne, 1974).

Selman’s (1980) well-known theory of interpersonal understanding is strongly structural-developmental in its focus. In this theory, interpersonal understanding develops as a function of social perspective taking – the ability to engage in cognitive processes while reasoning about interpersonal relationships that result in knowledge about another’s internal states (Eisenberg & Fabes, 1998; Selman 1977). Social perspective taking has a long-standing tradition as a theoretical concept of basic importance to both developmental and social psychology (Selman & Byrne, 1974), the roots of which are based on Piaget’s (1930, 2000) theory of cognitive development. Indeed, according to Selman and Byrne (1974), two of Piaget’s central concepts relate directly to its application: egocentrism, the inability to escape from one’s own worldview, and decentration, the ability to consider multiple perspectives or aspects of a situation. However, social perspective taking is a *social-cognitive* process that includes a developing understanding
of how points of view are related to one another and of the intrinsic psychological characteristics of individuals (Selman, 1980). Although perspective taking is social in nature by requiring the ability to infer another’s capabilities, attributes, and feelings, it also implies the ability to shift, balance, and evaluate both perceptual and cognitive information—skills which are clearly cognitive (Selman, 1971). As such, social perspective taking cannot merely be reduced to the application of cognitive skills to the social sphere but is instead prototypically social-cognitive in nature (Selman, 1971; Selman, 1980).

Considerable cross-sectional and longitudinal research (see Selman 1977; Selman & Byrne, 1974) has established that social perspective taking develops according to an invariant sequence of age-related structures or stages (Table 1). Similar to a child’s understanding of physical categories as conceptualized by Piaget’s (1930, 2000) cognitive-developmental model, each advanced stage of social perspective taking represents a shift in the child’s understanding of persons and of the relationship between self and others’ points of view (Selman, 1980). Moreover, research (see Selman, 1980) has confirmed that stages of perspective taking development follow the basic assumptions of (a) qualitative differences among stages, (b) an invariance of developmental sequence through these stages, (c) a structured wholeness across stages, and (d) a hierarchical integration among stages.

From this perspective then, a child comes to social experiences with a set of immature, but continually developing, social-cognitive structures that provide a means for the assimilation of social experiences at a level that makes sense to the child (Selman, 1980). However, relevant social experiences that do not make sense at a particular level simultaneously provide elements for the child to reorganize to a level that is more advanced. The move from stage to stage occurs through the mechanism of conceptual conflict, perceived as a child’s awareness of external evidence that conflicts with his or her own internal understanding of the social world (Selman, 1980).
The construct of social perspective *coordination* is predicated on Selman’s (1980) early work on the development of interpersonal understanding and perspective taking stages. Social perspective coordination is defined as an individual’s capacity to differentiate and integrate self and other’s viewpoints through an understanding of the relation between the thoughts, feelings, and wishes of each person (Schultz & Selman, 2000a). At the center of this definition is the development of psychosocial competence; the growth of the capacity to coordinate and take perspective on the relation between the self and others' points of view (Schultz & Selman, 2000a). However, the construct of social perspective coordination differs from Selman’s traditional investigation of perspective taking by considering “how one not only differentiates, but also integrates or balances, the perspectives of self and other in both thinking about and acting in actual social relationships” (Schultz & Selman, 2000b, p. 3).

In short, mature and competent interpersonal understanding is achieved through the development of social perspective coordination, which in turn is founded upon the ability to differentiate and integrate the perspectives of self and other. As such, social perspective coordination develops according to the sequence of age-related perspective taking stages established in previous research (see Table 1). However, social perspective coordination also evolves in interaction with three distinct, though highly related, developing psychosocial competencies: interpersonal understanding, interpersonal skills, and interpersonal meaning.

Interpersonal understanding entails theoretical knowledge of the nature of relationships and what developing individuals understand to be the core psychological and social qualities of other persons (Schultz & Selman, 2000a; Selman, 1980). The second competency, interpersonal skills, includes both the autonomy and intimacy strategies needed to make and maintain good relationships (Schultz & Selman, 2000a). Autonomy skills are defined as the ways in which individuals in situations of social conflict deal with the self and another to gain control over inner disequilibrium (Schultz & Selman, 2000a). Intimacy strategies are operationalized in the context
of shared experience; the harmonious experiencing of emotional and physical connections with another person (Schultz & Selman, 2000a). The third psychosocial competency involves interpersonal meaning, defined as the quality of emotional investment an individual is able to make in other persons and which include the values, attitudes, and beliefs held by an individual about particular relationships (Schultz & Selman, 2000a).
Table 1

**Developmental Levels of Perspective Taking in Social Perspective Coordination**

<table>
<thead>
<tr>
<th>Levels</th>
<th>Social Perspective Coordination</th>
<th>Ages</th>
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<tr>
<td></td>
<td>Concepts of Relations</td>
<td>Concepts of Persons</td>
</tr>
<tr>
<td>0</td>
<td>Egocentric</td>
<td>Undifferentiated</td>
</tr>
<tr>
<td></td>
<td>• Recognition that others have preferences different from one’s own – no strategies for figuring out what those differences might be.</td>
<td>• Cannot differentiate the physical and psychological characteristics of others.</td>
</tr>
<tr>
<td>1</td>
<td>Subjective</td>
<td>Differentiated</td>
</tr>
<tr>
<td></td>
<td>• Recognition of self and others as having differing perspectives – sees this determined by access to different information. No judgment of own behavior from perspective of another.</td>
<td>• Differentiations of physical and psychological characteristics – recognition that internal psychological states exist that are not observable to others.</td>
</tr>
<tr>
<td>2</td>
<td>Reciprocal</td>
<td>Self-Reflective</td>
</tr>
<tr>
<td></td>
<td>• Ability to take a second-person perspective on how own behavior might look to another and realize that others can do the same. Recognition of infinite regress of perspective taking.</td>
<td>• Others’ thoughts and feeling states are seen as potentially multiple. Recognition that self and others are capable of doing things they may not want to do.</td>
</tr>
<tr>
<td>3</td>
<td>Mutual</td>
<td>Third-Person</td>
</tr>
<tr>
<td></td>
<td>• Coordination of perspectives of self and others – reciprocal perspectives must be mutually coordinated for social satisfaction and resolution of perspectives to be effective.</td>
<td>• Children can step outside the interpersonal situation and view it from an objective position of “disinterested” third party – seeing the self as both actor and object.</td>
</tr>
<tr>
<td>4</td>
<td>Societal</td>
<td>In-Depth</td>
</tr>
<tr>
<td></td>
<td>• Adoption of shared norms and values. Recognition that societal norms given common meaning to experience.</td>
<td>• Perspective taking moves beyond third party interpretation to an abstract social analysis.</td>
</tr>
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*Note: Adapted from Selman (1980) and Selman & Byrne (1974)*.
Figure 1 illustrates Schultz and Selman’s (2000a) developmental model of the three psychosocial competencies of interpersonal understanding, skills, and meaning as they develop along parallel continua from immature (egocentric) to mature (in-depth). According to Schultz and Selman, each competency can be traced along a developmental pathway that all children travel, although each may travel along this path at different rates. Consequently, individuals may function at different levels of maturity in each of the three psychosocial competencies at any one time. However, development within and between each of the psychosocial competencies accounts for the transformation in the way children think about and act in relationships. Maturity is the capacity to function in an integrative way and comprises the coordination or integration of perspectives – hence, the achievement of social perspective coordination (Schultz & Selman, 2000a; Selman et al., 1997).
Figure 1

_Psychosocial Competencies in the Development of Social Perspective Coordination_

To: Maturity (Mutuality)

From: Immaturity (Egocentricity)

With Time and Experience

*Note:* Adapted from Schultz and Selman (2000a).
The Development of Emotional Understanding

The relation between social-cognitive development and children's understanding of emotion has long been a topic of interest to developmentalists (Harter & Buddin, 1987; Hughes & Dunn, 1998). The past 15 years have seen an ever-increasing number of experimental studies on children's understanding of emotion, reflecting a common consensus that the understanding of mental states is essential for everyday social relations (Hughes & Dunn, 1998). Indeed, as Fischer, Shaver, and Carnochan (1990) noted over a decade ago, "emotions develop, and as they do, they help structure and direct other aspects of development" (p. 82).

For example, the development of adaptive and successful social interaction and communication skills depends upon competence in recognizing and encoding emotion signals (Pillow, 1988; Schultz, Izard, Ackerman, & Youngstrom, 2001). Children adept at appraising and processing emotional stimuli are not only able to make sense of and respond appropriately to the behaviors they observe, but are also provided with tools that facilitate their own emotion regulation (Pillow, 1988; Schultz et al., 2001; Seja & Russ, 1999). Studies also support a link between the development of children's emotion knowledge and socially competent and appropriate behavior with peers (Cook, Greenberg, & Kusche, 1994; Denham & Belouad, 1994; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Greenberg, Kusche, Cook, & Quamma, 1995), the demonstration of empathic and prosocial behavior (Cassidy, Parke, Butkowsky, & Braungart, 1992; Denham, 1986; Denham & Belouad, 1994; Denham, McKinley, Conchoud, & Holt, 1990; Eisenberg, Fabes, & Losoya, 1997; Roberts & Strayer, 1996), and peer acceptance and popularity (Cassidy et al., 1992; Denham et al., 1990; Dunn, 1995; Greenberg et al., 1995).

Although there is no question that children report on the emotions of other people as well as themselves, and that they do so in a descriptive and not merely expressive manner (Harris, 1999), research has identified that emotion knowledge and understanding operate under developmental constraints (Saarni, 1999). A canon of studies has accumulated documenting the
existence of a developmental trend in children’s concepts of emotion through the delineation of a series of age-related changes (see Banerjee, 1997; Carroll & Steward, 1984; Donaldson & Westerman, 1986; Fischer et al., 1990; Harris, Olthof, & Terwogt, 1981; Harter, 1983; Hughes & Dunn, 1998; Saarni, 1999). For instance, evidence indicates that emotion knowledge is marked by a pervasive age change between 6 and 11 years (Harris & Olthof, 1982). Research suggests that two relatively distinct conceptions of emotion can be discerned between these ages: one that predominates among young children, and a second that predominates among older children (Harris et al., 1981). For young children (i.e., six years), emotion is made up of two components – a situation (e.g., an argument) and a behavior or bodily reaction (e.g., crying) that is elicited by the situation. Young children expect a person’s emotional state to be determined by the immediate situation and accordingly detect another’s emotion by noting immediate obvious reactions (Harris et al., 1981).

In contrast, from approximately 11 years, children begin to understand that current emotional reactions can be influenced by prior emotional states (Fischer et al., 1990; Harris & Olthof, 1982). Older children adopt a hybrid theory of emotion that is made up of three components – a situation, a bodily reaction, and an inner mental state (Harris et al., 1981). Older children recognize that, because visible reactions are an unreliable guide to inner mental states, one may fail to identify accurately another’s emotion (Fischer et al., 1990; Harris et al., 1981). Because younger children lack the ability to acknowledge this private inner aspect of emotion, they consequently cannot accept that emotion detection depends upon the link between inner feelings and its outward expression (Harris et al., 1981).

In sum then, the extant corpus of research indicates that there is an age-related trend in children’s understanding and attribution of emotion. Specifically, emotion understanding shifts from a focus on external situational cues and overt characteristics to internal mental cues over the course of development (Harris et al., 1981; Rholes & Ruble, 1984). Some researchers posit
that both these developmental changes are examples of the general shift in social cognition from an external to an internal orientation as suggested by a number of studies (e.g., Dollinger et al. 1980; Donaldson & Westerman, 1986; Flavell, 1992; Harris et al., 1981; Maas et al., 1978; Selman, 1980).

*Precursors to the Development of Conceptions of Mental Illness*

Several theories of social development assert an inextricable interaction between the constructs of perspective taking and emotional understanding (Banerjee, 1997; Denham, 1986; Eisenberg, Carlo, Murphy, & Van Court, 1995; Eisenberg, Miller, Shell, McNalley, & Shea, 1991; Eisenberg, Zhou, & Koller, 2001; Hoffman, 1975; Schutte et al., 2001). For example, some research supports that maturity and sophistication in one construct develops concurrently with sophistication in the other (Eisenberg et al., 1995; Eisenberg et al., 1991; Eisenberg et al., 2001; Turnbull, Carpendale, Racine, & Jones, 2004). Moreover, a number of researchers have typically distinguished among conceptual, cognitive, and affective perspective taking (Enright & Lapsley, 1980; Flavell, Botkin, & Fry, 1968; Smith, Leinbach, Stewart, & Blackwell, 1983; Selman, 1971), the latter of which involves mentally placing one’s self in another’s emotional situation and necessarily includes the ability to recognize another’s feelings (Smith et al., 1983).

Because the emotions and behaviors of other people are surely among the most salient features of a child’s world (Smith et al., 1983), it is plausible that children’s ability to adopt perspectives and understand the affective states of others influences their conceptions of disordered behavior, particularly given that mental disorders are by definition emotional processes. At present, we know little of the development of children’s conceptions of mental illness specifically, and even less regarding the mechanisms or processes that underlie them. Perhaps a certain level of perspective taking is required in order to develop a mature conception of mental illness. Perhaps a requisite level of emotional knowledge is necessary for a sophisticated understanding of mental illness. Possibly neither construct alone contributes to
maturity in mental illness, but instead operate maximally in combination. Are children who are early sophistcates in perspective taking and understanding of emotion precocious about understanding others' mental states (Dunn, 1995, 1999)? Can differences in children's emerging conceptions be linked to established indices of social-cognitive development, like social perspective coordination and emotion knowledge, rather than merely age? These unanswered questions are clearly worthy of empirical investigation.

This research examined the existence of developmental differences in children's conceptions of and attitudes toward psychopathology; particularly, their understanding of specific dimensions of psychological dysfunction that are most prevalent in childhood (e.g., depression, anxiety, aggression). Furthermore, given that there has been modest research on the social-cognitive underpinnings in conceptualizations of mental illness, little is known about whether children who have a strong grasp of such mental states are also more sophisticated in their perspective taking skills or understanding of emotion (Cutting & Dunn, 1999). Clearly, the question of how these constructs influence one another in the development of children's understanding of mental illness is surely important (Cutting & Dunn, 1999; Dunn, 1995). Accordingly, this research was a first attempt at determining, singularly and collectively, the potential influence of social perspective taking coordination and emotional understanding in predicting maturity in mental illness concepts. The following chapter reviews the existing literature on children's understanding of mental illness and presents the specific research questions of this study.

1 Research (see Albano, Chorpita, & Barlow, 1996; Coie & Dodge, 1998; DSM-IV-TR, 2000; Hammen & Rudolph, 1996; Hinshaw & Anderson, 1996; Mash & Wolfe, 2002) suggests these to be the most common psychopathologies experienced by children today.
Literature Review

A review of the literature reveals that empirical investigations into children's conceptions of psychopathology (i.e., depression, anxiety, aggression, psychosis) have roots in children's understanding of physical illness. Indeed, several studies concerned with the specific ways children conceptualize physical illness over the course of cognitive development have been conducted (see Burbach & Peterson, 1986). The central premise of such studies is that children's concepts of illness progress through a systematic and predictable sequence of developmental stages consistent with the findings of Piaget (1930, 2000) regarding the ontogenesis of causal reasoning (Bibace & Walsh, 1980). Specifically, studies investigating children's general definitions of illness (Millstein, Adler, & Irwin, 1981) and illness causality and treatment (Brewster, 1982; Kister & Patterson, 1980) indicate that children's conceptions of physical illness are stage dependent, with older children having a more complex and accurate representation of illness (Bibace & Walsh, 1980, 1981; Kister & Patterson, 1980; Perrin & Gerrity, 1981; Siegal & Peterson, 1999). Children's understanding has been found to range from the global and phenomenological concepts characteristic of preoperational thought, to the more sophisticated psychophysiological concepts characteristic of formal operational thought (Burbach & Peterson, 1986; Siegal & Peterson, 1999).

Despite the knowledge this research has contributed to our understanding of child development, such findings are limited in that they deal exclusively with the physical aspects of illness, leaving the concept of mental illness notably overlooked. With few exceptions (e.g., Secker et al., 1999; Spitzer & Cameron, 1995), most studies examining children's conceptions of psychopathology are restricted to the 1970s and 1980s.

This literature review considers previous research in two separate sections. The first explores whether children's conceptions of mental illness change in specifiable directions with age and/or development. The foci of these investigations address several dimensions of
children’s conceptions including children’s ability to identify disturbed behavior by
discriminating it from “normal” behavior and to recognize degrees of psychopathological
severity. A discrete aspect of this section concentrates mainly on age changes in the attribution
of causality. The second section regarding children’s conceptions of mental illness addresses
research on the nature of children’s attitudes toward their psychologically disturbed peers. A
small number of these studies have investigated developmental trends and the point at which
children’s attitudes become stable and enduring. Throughout this review, the terms mental
illness, mental disorder, psychopathology, and dysfunctional behavior will be used
synonymously to reflect terminology utilized in the literature.

Developmental Trends in Conceptions of Mental Illness

Though scarce, the extant corpus of research suggests age changes associated with
children’s conceptions of mental illness. Marsden and Kalter (1976) were among the earliest
researchers to investigate empirically this particular aspect of child development. They asked
whether normal children perceive the symptomatic behavior of their peers as psychologically
disturbed in the same manner that mental health professionals recognize psychopathology and, if
so, whether obvious grade and gender differences exist. Five vignettes describing one peer
exhibiting normal behavior and four exhibiting various degrees of psychopathology (school
phobia, antisocial character disorder, passive-aggressive character disorder, borderline psychotic)
were presented to fourth and sixth graders. Participants were subsequently interviewed
regarding their understanding of the central figures’ behavior. The vignettes had been submitted
to seven clinicians (e.g., child psychologists/psychiatrists) who were asked to rank order them
with respect to severity of dysfunction and to assign each to one of 11 nosological categories
(Marsden & Kalter, 1976).

Results revealed that children were able to discriminate significantly the behavior of a
normal peer from that of psychologically disturbed peers and make distinctions of severity that
were remarkably congruent with the views of mental health professionals. In addition, sixth graders recognized more psychopathology than did fourth graders, indicating differential attention to and valuing of specific behaviors, rather than differences in global conceptions of normality or deviance (Hoffman, Marsden, & Kalter, 1977; Marsden & Kalter, 1976). No statistically significant pattern of gender differences emerged from the study, although girls tended to normalize the behavior of the character in the psychotic vignette. A replication of the Marsden and Kalter study (Hoffman et al., 1977) strikingly confirmed these findings on essentially all points of analysis, suggesting that children’s conceptions of psychological dysfunction are both stable and measurable.

Coie and Pennington (1976) also reported age trends in children’s conceptions of mental illness. They asked first, second, fourth, seventh, and eleventh graders to describe peers whom they considered markedly different from most other children and to provide explanations for their deviant behavior. Participants were also presented with two brief vignettes depicting story characters whose behaviors exemplified qualities typically described as psychologically disturbed by adult judges – antisocial-aggressive behavior and reality-testing psychosis (see Coie, Costanzo, & Cox, 1975). Participants were requested to rate the degree of deviance demonstrated by each character and to explain their ratings.

Findings indicated that, with increasing age, children became less likely to reconstrue deviant behavior in “normalizing” terms that were typically employed to provide conventional social explanations for the characters’ deviant behavior (Coie & Pennington, 1976). For example, younger children (first and fourth graders) perceived the behavior of the aggressive story character as a result of genuine provocation, whereas the fearfulness of the psychotic character was seen as a reaction to a direct, overt threat. In contrast, older participants found the behaviors puzzling and paradoxical in that they were able to recognize the irrational qualities of behavior that the characters portrayed. As well, older children increasingly conceived of
deviance in terms of social norm violation indicating that, as a function of age, notions of social consensus acquire greater importance in children's conceptions of psychopathology (Dollinger et al., 1980). The researchers proposed that these results reflect important changes in social perspective-taking in that, not only do children acquire the ability to conceive that others have different perspectives from oneself, but also that others can be considered as having non-normative perspectives (Coie & Pennington, 1976).

Dollinger et al. (1980) utilized a survey asking children in grades 5 through 12 to list three kinds of problems with which clinical psychologists normally help people. Evidence indicated that children most frequently associated the term "psychological problem" with difficulties of a social nature (e.g., family, peer, or sexual) and that this tendency increased with age. However, also as a function of age, participants increasingly conceptualized problems as "internal to the person" (e.g., depression, fears, low self-esteem) and showed a decreased tendency to conceptualize problems in externalizing terms (e.g., behavior problems, criminality). These results are consistent with those of Coie and Pennington (1976) with respect to age changes in conceptions based on aggressive behavior and social norm violations. Dollinger et al. concluded that concepts of mental illness appear to follow an "external to internal" or "surface to depth" course similar to the development of social cognition (see Flavell, 1992; Donaldson & Westerman, 1986; Harris et al., 1981; Selman, 1980).

Spitzer and Cameron (1995) evaluated the impact of age and gender on children's ability to identify and classify psychopathology. A secondary purpose of their research was to identify how children defined the concept of mental illness and characterized people with mental illness in terms of deviant behavior. Children in first, fourth, and seventh grade were interviewed after the presentation of vignettes describing one normal and two psychologically disturbed peers (antisocial-aggressive and psychotic). Findings indicated that age was not a significant factor in children's ability to classify deviant behavior. Almost all participants correctly identified the
normal character but tended to normalize the behaviors of the aggressive and psychotic characters.

Although these findings contradict those of the research reviewed so far, the discrepancy may be explained by noting that the children’s characterizations of mental illness suggested that they did not perceive the deviant behavior in the vignettes as indicative of an illness in children, although they did so for adults. Because the children rejected the notion that mental illness exists in children, all three age groups tended to normalize the deviant behavior of the vignette characters. Moreover, the data revealed a developmental trend in knowledge regarding children's definitions of mental illness (Spitzer & Cameron, 1995). Specifically, for very young children (first grade), “mental illness” was virtually an unknown term. As children grew older, they were better able to define and connect the term to problems in thinking, mental retardation, and craziness. The term “crazy” was utilized by children in all grades and was comparable to adults’ definitions of mental illness. Although the definition of crazy for younger participants was based on unusual and overt behaviors, the definition for seventh graders was more akin to psychiatrists' definitions of mental illness, indicating more understanding and awareness among older children that craziness is a problem (Spitzer & Cameron, 1995). The authors also reported that gender had a significant effect on children’s ability to distinguish psychopathology in that boys were better able to identify deviant behavior than were girls.

Summary of findings

The converging evidence thus far indicates that children clearly discriminate disturbed from normal behavior (e.g., Dollinger et al., 1980; Marsden et al., 1977; Novak, 1974; see also Chassin & Coughlin, 1983; Secker et al., 1999). Moreover, this discrimination follows a maturational path in that, with age, “children become increasingly sophisticated in understanding psychopathology and [in] recognizing the intrapersonal and interpersonal factors that impinge on it” (Kazdin et al., 1984, p. 148). Whereas younger children have difficulty identifying disturbed
behavior, children from approximately the fourth grade on are able to make comparisons that assist them in distinguishing normal from deviant behavior (Spitzer & Cameron, 1995).

The trend in children’s ability to determine severity of various disturbances is also relatively clear in that children make distinctions of severity that are remarkably congruent with the views of mental health professionals. The role of gender in the ability to discriminate disturbed from normal behavior is less clear however. Although some researchers have reported no significant gender effect in their data (e.g., Coie & Pennington, 1976; Hoffman et al., 1977; see also Norman & Malla, 1983; Novak, 1974; Secker et al., 1999), others have demonstrated that girls tend to normalize psychotic behavior (Marsden and Kalter, 1976) while boys more accurately identify deviant behavior (Spitzer & Cameron, 1995).

**Developmental Trends in Attributions of Causality**

As previously noted, a child’s beliefs about the causes of behavior may influence his or her own dispositions, traits, and patterns of interaction (Kazdin et al., 1984; Maas et al., 1978). Certainly, attribution theory observes that people tend to ascribe the behavior of others to internal causes, while ascribing that same behavior in themselves to situational variables (Heider, 1958; Jones & Harris, 1967). This error in attribution has been found to influence both actions and attitudes, in some circumstances quite negatively (Beauvois & Dubois, 1988; Furnham & Gunter, 1984; Wagstaff, 1983; Zucker & Weiner, 1993). Given the importance that attributions may play in how children respond to those with mental illness, a brief section of this review is dedicated to research on children’s attributions of causality for psychological dysfunction, although very few researchers have investigated this topic directly.

In one study, Kalter and Marsden (1977) investigated fourth and sixth grade children’s attributions of causality and attempted to determine whether different types of mental illness were perceived as having different etiological roots. Using vignettes from a previous study (Marsden & Kalter, 1976), the researchers reported results indicating that the children did indeed
hold specific attributions regarding the etiology of psychological disorder. Specifically, children's interview transcripts were coded to capture four different etiological theories: inappropriate parenting, modeling, peer scapegoating/rejection, and problems internal to the vignette character. Evidence also revealed that each vignette elicited different etiological attributions that in no way related to the degree of psychopathology depicted in the stories. Further, though there was a general lack of consensus among participants in their views of etiology for each vignette, there was a significant tendency for older children to employ inappropriate parenting as their primary etiological theory.²

This increased use of parenting explanations is consistent with age changes in social-environmental attributions as established by Maas et al. (1978). These researchers evaluated attributions of causality in second, fourth, and sixth grade children using vignettes describing three psychologically disturbed characters (social withdrawal, aggressive, and self-punitive). Findings indicated that younger children viewed internal factors (e.g., “born that way”) as the predominant causes of psychologically disturbed behavior whereas older children saw social-environmental factors as predominant (e.g., interpersonal relationships with family and peers). As well, content of the vignettes affected locus of causality in that social withdrawal was perceived as resulting from internal factors more often than aggression and self-punitive behavior (Maas et al., 1978). As a result, with increasing age children were more likely to believe that changes in the social environment (finding new friends) could alter undesirable behavior (aggression). These authors concluded that a trend toward external-causal thinking about disturbed behavior develops as a function of age (Maas et al., 1978).

² In a rare study that examined children's conceptions of their own psychiatric illness, Kazdin et al. (1984) revealed that inappropriate parenting (i.e., yelling and arguing) figured prominently in the children's views of the causes of psychopathology. However, Kazdin et al. did not discern age changes associated with etiological theories, despite the participants falling within the age range of other studies showing differences among non-disturbed children.
Roberts et al. (1981) evaluated whether children perceive differential diagnoses, etiologies, prognoses, and treatments for imaginary peers described as suffering from either medical or psychological disorders. Four vignettes, each illustrating a character in one of four combinations of severity and type of disorder (mild/severe, physical/psychological) were presented to children in grades five and six. Although no age trends were identified, likely due to the limited age range of the sample, the evidence did indicate that the children made definite discriminations between medical and psychological disorders. In contrast to medical disorders, which were seen as primarily biologically based, psychological dysfunction was perceived as resulting from unpleasant environmental conditions. For example, participants saw the mild psychological disorder (antisocial-aggressive) as due to poor interpersonal relationships with others (e.g., rejection). These findings concur with those of Maas et al. (1978) with respect to participants attributing the causes of mild psychological problems to those of a social nature. Roberts et al.'s participants also accurately described the conditions of the two psychologically disturbed characters as being functions of reality distortion and innate aggressive tendencies, suggesting differential diagnoses in accord with mental health professionals as reported in previous studies (e.g., Marsden & Kalter, 1976).

Chassin and Coughlin (1983) used vignettes to explore changes in causal attributions in participants from grades 4 to 12. These researchers confirmed the findings of Maas et al. (1978), with one notable exception. They discerned an age-related increase in the use of psychological attributions (e.g., "something about the way he thinks or feels") among older adolescents, with such attributions replacing earlier physical explanations. Although there was some increase in social-environmental attributions as reported in previous research (e.g., Kalter & Marsden, 1977; Maas et al., 1978), the clearest age change was an increase in internal psychological attributions such as references to unobservable emotional and cognitive states. Chassin and Coughlin argued
that previous research may have obscured this finding by focusing on a general "internal"
category rather than making distinctions among different types of attributions.

This contention is supported by the research of Dollinger et al. (1980). Recall that these
researchers asked children in grades 5 to 12 to list three kinds of problems for which people are
referred to clinical psychologists. Evidence revealed that, though the tendency to associate
psychological problems with those of a social nature increased with age, participants also
increasingly conceptualized problems as internal to the person, demonstrating a more surface to
depth understanding of causality (Dollinger et al., 1980). Spitzer and Cameron (1995) confirmed
these findings by reporting that, although children in their study cited both psychological and
physical etiologies of mental illness, older participants emphasized internal psychological
etiologies more frequently than did younger children.

Summary of findings

Findings related to attributions of causality illustrate that children formulate different
etiological theories for mental illness. Some studies have demonstrated that, with increasing age,
children show a trend toward external-causal thinking (e.g., Kalter & Marsden, 1977; Maas et al.,
1978), attributing mental illness to the social environment. Other research has indicated an
increase in internal psychological attributions as a function of age (e.g., Chassin & Coughlin,
1983; Dollinger et al., 1980; Flavell, 1992; Spitzer & Cameron, 1995). The discrepancy may be
due to definitional issues that simply require further clarification in future research or may
indeed represent age changes in the attributions of causality. Perhaps at a relatively early age,
children discern how circumstances in the external environment contribute to the development of
mental illness, but with increasing age conceive of internal psychological states and understand
how these impinge on the ability to cope with the external environment. This assertion is
certainly in concert with the development of various aspects of social-cognitive growth that all
become more differentiated and psychological with increasing age, such as self cognition
(Flavell, 1992), the conceptualization of others’ personality (Heyman & Gelman, 2000; Rholes & Ruble, 1984), theory of mind (Hala & Carpendale, 1997); social perspective taking (Selman, 1971, 1980; Selman & Byrne, 1974), and emotional understanding (Carroll & Steward, 1984; Donaldson & Westerman, 1986; Fischer et al., 1990; Harris, et al., 1981; Harter, 1983; Hughes & Dunn, 1998; Saarni, 1999).

*Children’s Attitudes toward Others with Mental Illness*

Early sociometric studies of the social position of atypical children (e.g., physically and mentally disabled) within a larger group of normal children revealed that the atypical child holds a socially disadvantageous position within the larger peer group (Marsden & Kalter, 1976; see also Baldwin, 1958; Centers & Centers, 1962; Dentler & Mackler, 1962; Johnson, 1950). Research also suggests that children with behavioral disturbances experience numerous social and emotional difficulties relative to their “nondisabled” peers, including low self-esteem (Black, 1974), inadequate social skills (Bender & Smith, 1990), egocentricity and lower empathy (Kaplan & Arbuthnot, 1985), fewer friends, and lower overall acceptance by their peers (Armstrong, Rosenbaum, & King, 1992). Moreover, investigations have indicated that many rejected and socially isolated children display unfortunate characteristics such as aggression, withdrawal, lack of sociability, and poor cognitive skills (Newcomb, Bukowski, & Pattee, 1993). Nevertheless, research related specifically to children’s attitudes toward their peers with mental illness is relatively scarce (Poster, Betz, McKenna, & Mossar, 1986).

One early investigation (Novak, 1974) found that children in grades four through six rated descriptions of five psychologically disturbed peers (depressed, phobic, immature, aggressive, and schizoid) more negatively on dimensions of attractiveness, social distance, and perceived similarity to self relative to a normal peer. Interestingly, participants rated the peer described as aggressive significantly less attractive than *any other* description.
The finding that aggressive vignette characters are viewed more negatively than other psychologically disturbed characters has been demonstrated in other studies. For instance, in the Marsden and colleagues (1977) study, the aggressive character was liked significantly less than the normal (i.e., mentally healthy, non-aggressive) peer, and disliked significantly more than either the psychotic or the phobic peer.

Roberts et al. (1981) confirmed these findings in a study that described imaginary peers suffering from either medical or psychological disorders. Evidence suggested that participants perceived the two medically disordered peers and the severe psychologically disordered peer (psychotic) as more desirable potential friends than they viewed the mild psychologically disturbed peer who displayed aggressive, acting-out behaviors. Research by Maas et al. (1978) and Spitzer and Cameron (1995) also indicates that aggressive, externalizing behavior is rejected more frequently, and is consistently perceived as more negative, more deviant, and less desirable than normal, internalizing, or more severely psychologically disturbed behavior (i.e., psychotic behavior). Further, a study by Kazdin et al. (1984) indicated that even among children hospitalized for various psychopathologies, aggressive behavior was deemed as a more severe impairment and less acceptable than other forms of mental illness.

Children's attitudes toward people with mental illness have also been evaluated more globally in efforts to identify age changes. Poster et al. (1986) analyzed age changes among children in grades three through six using both vignettes and human figure drawings. Their results indicated no significant age differences; children in all grades perceived peers with mental illness as aggressive, hostile, inappropriate, and self-abusive. Indeed, when asked to describe a peer with mental illness, participants typically portrayed the image of an angry, aggressive personality. Similar results have been supported in longitudinal studies aimed at clarifying both developmental trends and the point at which children's attitudes become stable and enduring (Weiss, 1986, 1994). Measuring attitudes toward persons with mental illness with
With respect to social distance and attraction, Weiss (1994) demonstrated that children’s attitudes were evident by kindergarten and did not change appreciably with age or grade. Moreover, children’s attitudes were generally negative in that all age groups (grades K-8) regarded others with mental illness with fear, disgust, and aversion.

Summary of findings

In general, the findings indicate that children view peers with mental illness as distasteful and prefer not to associate with them, although attitudes have been shown to vary with respect to the type of behavior being displayed. Research utilizing vignettes indicates that aggressive behavior is rejected more frequently and is perceived as more negative and less desirable than normal, internalizing, or more severely psychologically disturbed behavior. Evidence also indicates that children’s attitudes toward mental illness are established at a very early age and do not evolve with age or development (see Weiss, 1986, 1994). Specifically, children from kindergarten through grade 11 perceive people with mental illness as aggressive, aversive, and socially unacceptable. These findings suggest that children’s attitudes conform closely to those of adults (Link et al., 1999; Nunnally, 1961; Phelan et al., 2000), lending credence to the notion that adult stereotypes of mental illness are learned in childhood (Maas et al., 1978; Scheff, 1984). More importantly, they provide an indication that even children hold antiquated and uninformed views of persons with mental illness.

Cumulative Summary of the Literature

The data on children’s conceptions of mental illness appear to converge around a central theme – that there are manifest age differences in children’s ability to (a) discriminate disturbed behavior from normal behavior, (b) recognize degrees of psychopathological severity, and (c) generate more sophisticated attributions of causality. Though limited, the evidence also suggests that age is not a function in children’s attitudes toward people with mental illness. Specifically, children of varying ages regard their psychologically disturbed peers with dislike and rejection,
especially those who exhibit aggressive behavior. Moreover, there is some research to suggest that these perceptions do not evolve developmentally (Weiss, 1986, 1994). Such findings are paradoxical in that with age, children’s conceptions of mental illness become more refined and sophisticated while their attitudes remain archaic.

How have the age differences that do exist in children’s mental illness concepts been interpreted in the literature? To paraphrase Bibace and Walsh (1981), studies have varied in the extent to which they integrate the empirical findings of age differences with theoretical explanations of development. Similar to research on children’s concepts of physical illness, most clinical studies examining concepts of mental illness in children of differing ages do not refer to developmental theory (Bibace & Walsh, 1981). Indeed, in the majority of studies, only the empirical marker of age has been utilized and no attempt made to understand or explain age differences in terms of a social-cognitive developmental framework. Given that age is a poor and very inaccurate predictor of cognitive maturity (Bibace & Walsh, 1980; Bibace, Wiehe, & Leeman, 2001; Siegal & Peterson, 1999), this approach is extremely problematic and does not provide strong evidence of the relation between social-cognitive development and mental illness concepts.

Among the few studies that have attempted to examine age changes in terms of social-cognitive development, most explanations occur only in post hoc discussions of the findings (Bibace & Walsh, 1981). For instance, we see Dollinger et al. (1980) arguing that their data “converge with developmental trends in children’s self-conceptions and other aspects of social cognition [and that]...such trends may derive from developmental changes in children’s cognitive structures” (p. 194). We also see some researchers (e.g., Coie & Pennington, 1976; Maas et al., 1978) suggesting that these findings parallel studies on children’s moral judgment (e.g., Piaget, 1932/1977) in that young children view the actions of others primarily in terms of overt consequences rather than the intentions that guide these actions.
In sum, although the research steadily demonstrates age changes in children’s emerging conceptions of mental illness, it remains to be seen whether such conceptions are consonant with established stages of cognitive or social-cognitive development reminiscent of that found in concepts of physical illness (see Burbach & Peterson, 1986; Siegal & Peterson, 1999). Furthermore, much of the research on this topic is methodologically lacking in several respects. Consider, for example, that several investigators furnished inadequate descriptions of samples, instruments, and procedures in their research. Some failed to report the ages, ethnicity, socioeconomic status, or verbal ability of their participants. To the extent that such factors may influence the development of mental illness concepts, investigators should report on such factors and control them where possible (Burbach & Peterson, 1986; Dunn, 1999). As aptly discerned by Dollinger et al. (1980), “Future studies on children’s conceptions of human behavior (be it normal or abnormal) should also assess verbal facility and intellectual functioning as possible mediating variables” (p. 194).

**Statement of the Problem and Overview of the Study**

As formerly noted, the question of whether children’s understanding of mental illness (i.e., anxiety, depression, aggression, and psychosis) evolves in terms of social-cognitive developmental theory has been largely unexplored. Instead, the majority of researchers have been content to consider age changes in mental illness concepts as evidence of developmental maturity. However, because age is not commensurate with developmental maturity, it does not provide strong evidence of the relation between social-cognitive development and conceptions of psychopathology (Bibace & Walsh, 1980; Bibace et al., 2001; Siegal & Peterson, 1999). Undoubtedly, this is an arena open for further empirical investigation.

Second, the ways in which children’s conceptions develop and the mechanisms underlying their emergence have important implications for social understanding and social competence (Bosacki & Astington, 1999; Heyman & Gelman, 2000). Given that there has been
virtually no consideration of social-cognitive differences in children's abilities to conceive of mental illness as defined throughout this study, the question of what mechanisms influence its developmental course remains nearly unknown (Dunn, 1995). Because children's appreciation of and explanations for disordered behavior require a certain level of perspective taking and emotional understanding maturity, it is likely that social perspective coordination and emotion knowledge both underlie and operate as precursors to age differences in children's conceptions of mental illness. Nonetheless, research has not yet examined the relations of these social-cognitive constructs, independently or in combination, as important contributors to differences in children's burgeoning understanding of psychopathology.

Finally, despite the long-standing research interest in children's social-cognitive development (see Flavell, 1992; Selman, 1980; Shantz, 1983) and the prevalence of psychological disorders in children (Bird, 1996; Mash & Wolfe, 2002; U.S. Department of Health and Human Services, 1999) that would justify a more comprehensive understanding of childhood psychopathology, the current model of children's understanding of mental illness is lacking in several methodological respects. For instance, we do not know whether differences in mental illness concepts are related to overall verbal ability, and as such, the present study addressed such concerns by controlling for verbal ability as a potential confounding variable.

Research Questions and Design

This research involved a cross-sectional, quasi-experimental factorial design that addressed the following research questions:

1. What role do gender and grade play in dimensions of children's conceptions of mental illness, social perspective coordination, and emotional understanding?

2. Do children's conceptions of mental illness vary as a result of the type of disordered behavior displayed?
3. What are the relations of children's conceptions of mental illness to social perspective coordination and emotional understanding?
Methodology

Participants

Participants included 160 predominately-English\textsuperscript{3} speaking (90\%) middle-class students in the first, fourth, and seventh grades. Table 2 shows the distribution of participants by grade level, gender, mean age, and mean verbal ability score. Students were recruited from two elementary schools and one middle school in the same suburban school district of a large Western Canadian city. Only those students who had written parental consent (Appendix B) and who agreed to partake in the study (Appendix C) participated in the present investigation. The overall participation rate was 72%.

Table 2

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Girls</th>
<th>Number of Boys</th>
<th>Mean Age (SD)</th>
<th>Mean PPVT Standard Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>21</td>
<td>21</td>
<td>7.07 years (.26)</td>
<td>105</td>
</tr>
<tr>
<td>Grade 4</td>
<td>27</td>
<td>20</td>
<td>10.02 years (.15)</td>
<td>105</td>
</tr>
<tr>
<td>Grade 7</td>
<td>35</td>
<td>36</td>
<td>13.01 years (.12)</td>
<td>106</td>
</tr>
</tbody>
</table>

Measures

Demographic Information (Appendix D)

During interviews, participants were queried as to their family composition and language spoken at home. Information confirming birthdate and home address was collected from school

\textsuperscript{3} The language/ethnic breakdown of the remaining 10\% of students was as follows: 3.1\% Cantonese, 1.3\% Mandarin, 2.5\% Punjabi, and 3.1\% “Other” (i.e., Serbian, Greek, and Tagalog).
records. Socioeconomic status was ascertained by cross-referencing each participant's home address postal code with Canada census data detailing each neighborhood's mean income. SES for the entire sample ranged from $48,000 to $68,000 per year.

*Verbal Ability (Appendix E)*

Receptive verbal ability was measured via the third edition of the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997). The PPVT-III contains 204 items in 17 sets of 12 items each. Administration involved presenting a stimulus word and four pictures to the student, who then pointed to the picture that best represented the stimulus word. Administration discontinued when the student reached a ceiling of eight errors, whereupon all correct responses were summed and converted to standard scores. The PPVT-III is a standardized test with a mean of 100 and a standard deviation of 15. The test is often used as a proxy for cognitive ability and is supported by research suggesting moderate to high criterion-related validity correlations with the WISC-III Verbal IQ scale ($r = .92$), the WISC-III Performance IQ scale ($r = .84$), and the WISC-III Full-Scale IQ ($r = .90$) (Maddux, 1999). PPVT-III internal consistency and test-retest reliabilities are consistently high (alpha coefficients ranging from .92 to .98 and .91 to .94, respectively).

*Social Perspective Coordination (Appendices F and G)*

The Relationship Questionnaire (Rel-Q; Schultz & Selman, 2000a, 2000b) is the only multiple-choice instrument that assesses developmental levels of interpersonal competency and maturity of social perspective coordination. One version of the Rel-Q requires third- to fourth-grade reading skills and is appropriate for administration to students in the second half of third grade through high school (hereafter referred to as the “4+ Rel-Q”). A second version, using verbal instruction and pictures of animals instead of words, is specifically intended for use in kindergarten to third grade (the “K-3 Rel-Q”). Though conceptually similar, the two versions are empirically separate and include different questions with different multiple-choice responses.
Nonetheless, the versions are parallel in structure and based on the same developmental theory (Schultz & Selman, 2000b). As such, both versions include the following subscales: interpersonal understanding, hypothetical interpersonal skills, and perspective taking. The 4+ Rel-Q includes two additional scales: real-life interpersonal skills and personal meaning. Each version also yields an overall maturity scale that is computed by averaging the individual subscales. Despite the K-3 version containing fewer subscales than the 4+ version (for both developmental and methodological reasons), overall maturity scores are to be viewed as equivalent (L. H. Schultz, personal communication, November 18, 2003; Schultz & Selman, 2000b).

Each multiple-choice response to the items in the Rel-Q represents a specific developmental level of social perspective coordination in the scale represented by the item (see Table 1). Rel-Q participants are required to rate each multiple-choice response on a 4-point Likert scale (poor, average, good, excellent) and choose the “best” response (where the meaning of “best” is left to the individual). Both versions of the Rel-Q yield two scores for each subscale (i.e., interpersonal understanding, hypothetical interpersonal skills, perspective taking, real-life interpersonal skills, personal meaning): an “item-rating” score established from the separate ratings of the four multiple-choice response items, and a “best-response” score based on which response of the four was selected as best. Higher scores on each of these represent a more mature level of social perspective coordination.

Psychometric analyses reported by Schultz, Barr, and Selman (2001) and Schultz and Selman (2000a, 2000b) indicated that Cronbach’s alpha reliabilities on the K-3 version for the average item-rating score and average best-response score were .65 and .47 respectively. On the 4+ version, Cronbach’s alphas were .85 for the average item-rating score and .75 for the average best-response score. In the present study, Cronbach’s alpha on the K-3 was found to be adequate for the average item-rating score ($\alpha = .56$) and poor for the average best-response score ($\alpha = .22$).
On the 4+ version, Cronbach’s alpha for the average item-rating score was .64 and for the average best-response score was .45. As in recent studies utilizing the Rel-Q (e.g., Schonert-Reichl, Smith, Zaidman-Zait, & Buote, 2002), best-response scores were eliminated from further statistical analyses because of poor reliabilities.

Conceptions of Mental Illness (Appendices H, I, and J)

Five vignettes adapted from those developed by psychiatrists and used extensively in previous studies (e.g., Chassin & Coughlin, 1983; Hoffman et al., 1977; Kalter & Marsden, 1977; Marsden & Kalter, 1976; Spitzer & Cameron, 1995) were presented to each participant to assess their conceptions of mental illness (Appendix H). The vignettes were adapted from Marsden and Kalter’s (1976) composites of child psychiatric patients designed to depict variations in both severity of psychological dysfunction and type of psychopathology. The first Marsden and Kalter vignette presented a passive-aggressive character disorder; the second an incipient school phobic; the third vignette an antisocial-conduct disorder; and the fourth a psychotic/schizophrenic disorder. A fifth vignette was developed to represent a normal child experiencing a situational problem and its ultimate resolution. Each vignette was matched for length, written in a language familiar to children, set in the school context to provide a common backdrop, and focused on the vignette character as the central figure.

Given the dated nature of the vignettes, and because the prevalence of various childhood psychopathologies has changed since the 1976 Marsden and Kalter study, the vignettes were revised and modernized for this study using symptomatology criteria outlined in the text revised fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000). In accord with research suggesting that anxiety disorders (Albano, Chorpita, & Barlow, 1996; Mash & Wolfe, 2002), depression (Hammen & Rudolph, 1996; Mash & Wolfe, 2002), and conduct disorders (Coie & Dodge, 1998; Hinshaw & Anderson, 1996; Mash & Wolfe, 2002) are the most common psychopathologies experienced by
children today, the vignettes described these types of disorders for presentation to participants. In addition, one vignette describing a psychotic central figure was developed to provide a wide range of psychopathological severity across vignettes. Analogous to the Marsden and Kalter study, the vignettes were submitted to seven clinical experts (5 clinical psychology graduate students and 2 clinical psychologists) who were asked to make independent ratings on the type of psychological dysfunction implied by the description of the central figure in each vignette (see Appendix I). Kendall's coefficient of concordance was $W = .81, \chi^2 = 50.87, p < .01$, indicating high agreement.

The Children's Perceptions of Psychopathology Inventory (CPPI; Kazdin et al., 1984, Appendix J) was used to evaluate participants' conceptions of psychopathological dysfunction, as portrayed by the central figure in each vignette. The CPPI is a 54-item self-report measure consisting of seven scales: liking and friendship, severity of dysfunction (i.e., the ability to function adaptively), positive prognosis, similarity to oneself, causal influences, help from others, and interventions to help behavior. Given the research questions guiding this investigation, and in the interests of facilitating efficient participant responding, only four of the seven subscales were utilized in the present study; liking and friendship, adaptive functioning, positive prognosis, and causal influences.

Each CPPI scale item is coded in a five-point format ranging from 1 (not at all) to 5 (very much or very often). Items in each of the first three scales were combined to yield subscale scores for overall estimates of liking and friendship ($\alpha = .69$), adaptive functioning ($\alpha = .66$), and estimations of positive prognosis ($\alpha = .86$). Higher scores on the liking and friendship scale indicated positive feelings of liking and friendship towards the central figure. Higher scores on the adaptive functioning scale reflected enhanced adaptive functioning and hence, more positive impressions about the behavior of the central figure. Higher scores on the positive prognosis
scale indicated greater predictions of positive prognosis for the future. Items in the causal influence scale identify alternative and “not necessarily related” causes. Consequently, each individual item reflects alternatives designed to be evaluated separately (Kazdin et al., 1984) and higher scores signify a greater acceptance of each cause as an explanation for the behavior of the central figure.

*Emotional Understanding (Appendix K)*

The 12-item Emotional Understanding Interview (EUI; Cassidy et al., 1992) was used to tap children’s understanding of the causes and consequences of emotional experience. The EUI requires participants to look at four same-sex line drawings of a child who is experiencing a single emotion (i.e., happiness, sadness, anger, and fear) and then answer a series of open-ended questions. The line drawings were based on photographs used in prior research (see Cassidy et al., 1992) and were presented to a group of psychology faculty and graduate students who identified them as clear exemplars of each emotion. Interview questions address five domains of emotional understanding including the (a) identification of emotion (e.g., “How do you think this child is feeling?”), (b) experience of emotion (e.g., “Do you ever feel like this?”), (c) causes of emotion (e.g., “What kinds of things make you feel this way?”), (d) emotional expression (e.g., “When you feel this way, do you let other people see how you feel?”), and (e) action response (e.g., “If you saw another kid looking this way, what would you do?”). The EUI was selected as an appropriate measure of emotional understanding given its assessment of the three components of mature emotional development identified in previous research (see Greenberg et al., 1995): the ability to recall and describe personal emotional experiences; the ability to identify emotions in self; and the ability to identify emotions in others.

Although responses were intended to be scored dichotomously to indicate the presence or absence of emotional understanding (2 = reflective of emotional understanding; 0 = not reflective of emotional understanding), participants who identified the wrong emotion but correct valence
(positive versus negative) received a score of one (see Denham, 1986; Turnbull et al., 2004). Responses were summed across all four line drawings for a maximum emotional understanding score of 96.

Though limited, previous research on the EUI has demonstrated excellent interrater and internal consistency reliabilities (coefficients ranging from .78 to 1.0) (see Cassidy et al., 1992; Dunn & Cutting, 1999; Shipman, Zeman, Penza, & Champion, 2000). In the present study, Cronbach’s alpha was .80. A research assistant who received intensive training in EUI coding independently scored a randomly selected 25% of the questionnaires for an intraclass correlation coefficient of .87.

**Procedure**

This study was presented to participants as an attempt to understand children’s thoughts and feelings about other children’s behavior. Participants were individually administered all measures during regularly scheduled class time. Two trained research assistants facilitated data collection at each of the three participating schools. Demographic information (i.e., birthdate, home address) for each participant was collected from school records prior to questionnaire administration. To both establish rapport and collect further demographics, participants were asked about their family composition and language spoken most often at home. Formal testing began with the presentation of the mental illness vignettes, which were alternately read aloud and accompanied by CPPI questions. That is, one vignette was read aloud and followed by CPPI questions, then the next vignette was read and so forth until all case descriptions and CPPI questions had been completed for each description.

To ensure attentiveness to and understanding of the vignettes, participants were asked to reiterate each case description before the presentation of the CPPI questions. In accord with procedures outlined by Kazdin et al. (1984), questionnaire administrators helped prompt participant’s memories of the vignettes by instructing them in story details if they reiterated...
incorrectly. Further, a card with a graphic depiction of a 5-point scale was presented after each question to facilitate participant responding (Kazdin et al., 1984). Vignettes were presented in random order to eliminate systematic order effects and, due to the possibility of participant age-gender × vignette age-gender interactions that were not of direct interest in this study, the central figure in each vignette was described as the same age and gender as that of the participant.

Following a 10-minute break, the EUI and Rel-Q measures were presented to participants in counterbalanced order. Data collection concluded with the administration of the PPVT-III. Altogether, the administration of measures took approximately 1 hour and 30 minutes for younger participants and just over 1 hour for older participants.
Results

To address each of the research questions planned in this study, several statistical analyses were conducted. Note that in light of recent recommendations (e.g., American Psychological Association, 2001; Thompson, 2002; Wilkinson & APA Task Force on Statistical Inference, 1999), effect sizes (partial eta-squared; $\eta^2$) were reported where relevant in order to provide information about the magnitude of group differences beyond statistical significance. According to criteria proposed by Cohen (1988), eta-squared effect sizes ranging from .06 to .14 are considered moderate whereas those greater than .14 are considered large. Further, given several studies showing concurrent relations between verbal ability and various facets of social cognition (see Cutting & Dunn, 1999; Dunn et al., 1991; Schultz et al., 2001), receptive verbal ability assessed via scores on the PPVT-III was covaried in all applicable analyses. Finally, statistically significant effects were followed by a series of univariate analyses with a Bonferroni correction on each dependent variable (Tabachnick & Fidell, 2001).

Multivariate statistics were selected as the appropriate method of analyses for the majority of this study’s research questions, as many of the questions lend themselves to an assessment of overall, simple, and group contrast effects (Huberty & Morris, 1989). Moreover, the outcome variables investigated in this study are not conceptually independent of one another (e.g., the constructs of perspective taking and emotional understanding were selected precisely because they are presumed to be related to conceptions of mental illness), which in turn impedes the capacity of multiple univariate statistics to provide meaningful information (Hubert & Morris, 1989). In a similar vein, multivariate statistics were selected to avoid the concern of controlling for inflated Type I error that results from the univariate analyses of multiple correlated dependent variables (Tabachnick & Fidell, 2001).
Preliminary Analyses

Composite Creation: Positive Beliefs of Mental Illness Composite Score

In order to examine children's global conceptions of mental illness, it was first necessary to create a composite score representing their overall understanding. This composite score was computed by summing the three CPPI subscales of liking and friendship, adaptive functioning, and positive prognosis across each of the four mental illness vignettes of depression, anxiety, conduct disorder, and psychosis (α = .85). Because of the positive nature of the subscale items included in the composite score, higher scores on the composite do not denote “more” mental illness. Instead, higher scores should be interpreted as reflecting more positive impressions or beliefs about the behavior of the central figure.

Composite Creation: Causality Composite Scores

Recall that the CPPI causal influences scale provides alternative and “not necessarily related” causes for dysfunctional behavior. Because the 15 independent causality items across each of the mental illness vignettes resulted in an unmanageable amount of data that obscured the findings, a data reduction strategy was employed to create causality composites, thereby reducing the number of items in the scale. Based on conceptual categories identified in previous research (see Chassin & Coughlin, 1983; Diamond, 1993; Dollinger et al., 1980; Kalter & Marsden, 1977; Maas et al., 1978; Sigelman, 1991), the independent items were combined into two separate causality subscales; physical/biological causes or explanations of behavior (4 items; α = .72) and social/environmental explanations of behavior (9 items; α = .83). The remaining two items (dispositional causes of behavior and psychological illness causes of behavior) were examined independently.
Differences in Children’s Conceptions of Mental Illness, Social Perspective Coordination, and Emotional Understanding

To examine gender and grade differences in children’s conceptions of mental illness, social perspective coordination, and emotional understanding, a 2 (gender) X 3 (grade) MANCOVA was conducted using as dependent variables the mental illness vignette composites of the Children’s Perceptions of Psychopathology Inventory and scores from the Relationship Questionnaire and Emotional Understanding Interview. After adjusting for verbal ability, statistically significant effects of both gender, $F(7, 147) = 3.00, p < .01, \eta^2 = .13$ and grade, $F(14, 294) = 58.57, p = .00, \eta^2 = .74$ were observed. Follow-up univariate analyses of each individual dependent variable using a Bonferroni adjusted alpha illustrated that girls had significantly higher emotional understanding scores than boys, $F(1,153) = 7.06, p < .01, \eta^2 = .05$. However, boys showed greater attributions of dysfunctional behavior to both physical/biological, $F(1, 153) = 11.71, p < .01, \eta^2 = .07$ and dispositional, $F(1, 153) = 4.12, p < .05, \eta^2 = .03$ causes, indicating a greater acceptance among boys of these causes as explanations for the dysfunctional behavior of the mental illness vignette characters. Table 3 presents adjusted means and standard errors by gender.
Table 3

Descriptive Statistics for Emotional Understanding, Social Perspective Coordination, Positive Beliefs of Mental Illness Composite, and Causality Composite Scores by Gender

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 77</td>
</tr>
<tr>
<td>1. Emotional Understanding</td>
<td>82.57 (85)</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
</tr>
<tr>
<td></td>
<td>n = 83</td>
</tr>
<tr>
<td>2. Social Perspective Coordination</td>
<td>1.93 (01)</td>
</tr>
<tr>
<td>3. Positive Beliefs of Mental Illness</td>
<td>2.29 (05)</td>
</tr>
<tr>
<td>4. Causality Composites</td>
<td></td>
</tr>
<tr>
<td>a. Biological/Physical</td>
<td>1.97* (06)</td>
</tr>
<tr>
<td>b. Dispositional</td>
<td>1.90* (06)</td>
</tr>
<tr>
<td>c. Social/Environmental</td>
<td>1.97 (06)</td>
</tr>
<tr>
<td>d. Psychological Illness</td>
<td>2.00 (09)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 83</td>
</tr>
<tr>
<td>1. Emotional Understanding</td>
<td>85.67* (80)</td>
</tr>
<tr>
<td>2. Social Perspective Coordination</td>
<td>1.96 (01)</td>
</tr>
<tr>
<td>3. Positive Beliefs of Mental Illness</td>
<td>2.31 (05)</td>
</tr>
<tr>
<td>4. Causality Composites</td>
<td></td>
</tr>
<tr>
<td>a. Biological/Physical</td>
<td>1.68 (06)</td>
</tr>
<tr>
<td>b. Dispositional</td>
<td>1.72 (06)</td>
</tr>
<tr>
<td>c. Social/Environmental</td>
<td>1.89 (05)</td>
</tr>
<tr>
<td>d. Psychological Illness</td>
<td>1.94 (09)</td>
</tr>
</tbody>
</table>

Note: Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. $p < .05.$

With respect to grade, univariate analyses showed statistically significant increases from grade one to grade seven for the relationship questionnaire, $F(2, 153) = 809.66, p = .00, \eta^2 = .91$, the emotional understanding interview, $F(2, 153) = 7.91, p = .00, \eta^2 = .10$, and the attribution of dysfunctional behavior to psychological illness, $F(2, 153) = 18.98, p = .00, \eta^2 = .20$. That is, with age, children demonstrated increased social perspective taking and emotional understanding and made significantly greater attributions of mental illness to psychological illness explanations.

Statistically significant decreases across grades were found for the positive beliefs of
mental illness composite, \( F(2, 153) = 6.25, p < .01, \eta^2 = .08 \), and attributions to both physical/biological, \( F(2, 153) = 8.73, p = .00, \eta^2 = .10 \), and dispositional, \( F(2, 153) = 5.24, p < .01, \eta^2 = .06 \) explanations of dysfunctional behavior. Thus, with age, children conceptualized mental illness in less positive terms and made significantly fewer attributions to physical/biological and dispositional explanations. Adjusted means, standard errors, and pairwise comparisons by grade are presented in Table 4.

Table 4

*Descriptive Statistics for Emotional Understanding, Social Perspective Coordination, Positive Beliefs of Mental Illness Composite, and Causality Composite Scores by Grade*

<table>
<thead>
<tr>
<th></th>
<th>Grade 1</th>
<th>Grade 4</th>
<th>Grade 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 42 )</td>
<td>( n = 47 )</td>
<td>( n = 71 )</td>
</tr>
<tr>
<td>1. Emotional Understanding</td>
<td>80.79(a) (1.10)</td>
<td>85.45(b) (1.05)</td>
<td>86.12(b) (.85)</td>
</tr>
<tr>
<td>2. Social Perspective Coordination</td>
<td>1.56(c) (.01)</td>
<td>2.08(d) (.01)</td>
<td>2.20(e) (.01)</td>
</tr>
<tr>
<td>3. Positive Beliefs of Mental Illness</td>
<td>2.44(f) (.06)</td>
<td>2.29 (.06)</td>
<td>2.17(g) (.05)</td>
</tr>
<tr>
<td>4. Causality Composites</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Biological/Physical</td>
<td>2.07(h) (.08)</td>
<td>1.73(i) (.08)</td>
<td>1.67(i) (.06)</td>
</tr>
<tr>
<td>b. Dispositional</td>
<td>2.01(j) (.08)</td>
<td>1.74 (.08)</td>
<td>1.68(k) (.06)</td>
</tr>
<tr>
<td>c. Social Environmental</td>
<td>1.98 (.07)</td>
<td>1.83 (.07)</td>
<td>1.97 (.06)</td>
</tr>
<tr>
<td>d. Psychological Illness</td>
<td>1.62(l) (.12)</td>
<td>1.82(l) (.11)</td>
<td>2.47(m) (.09)</td>
</tr>
</tbody>
</table>

*Note:* Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different subscripts differ significantly at \( p < .01 \).
Differences in Children’s Recognition of Adaptive Functioning, Estimations of Positive Prognosis, and Attitudes toward Mental Illness

To examine more thoroughly differences in children’s conceptions of mental illness, the positive beliefs of mental illness composite score was decomposed into the CPPI subscales of liking and friendship, adaptive functioning, and positive prognosis for analysis in a 2 (gender) X 3 (grade) MANCOVA. After adjusting for verbal ability, a statistically significant effect of grade, $F(6, 302) = 10.08, p = .00, \eta^2 = .17$ was observed. The independent variable of gender did not reach statistical significance and no significant interactions emerged.

Table 5 illustrates that participants’ attitudes toward the vignette central figure as measured by scores on the liking and friendship subscale were significantly different between grade one and grade seven participants, $F(2, 153) = 4.07, p < .05, \eta^2 = .05$. Estimates of positive prognosis also decreased significantly across grades, $F(2, 153) = 19.10, p = .00, \eta^2 = .20$. These findings suggest that with age, children conceptualized the vignette characters as less likeable and with a poorer long-term prognosis. No significant grade differences were found for recognitions of adaptive functioning.
Table 5

**Descriptive Statistics for CPPI Subscales of Liking and Friendship, Adaptive Functioning, and Positive Prognosis**

<table>
<thead>
<tr>
<th></th>
<th>Grade 1</th>
<th>Grade 4</th>
<th>Grade 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 42</td>
<td>n = 47</td>
<td>n = 71</td>
</tr>
<tr>
<td>Liking and Friendship</td>
<td>2.34&lt;sub&gt;a&lt;/sub&gt; (.07)</td>
<td>2.31 (.07)</td>
<td>2.12&lt;sub&gt;b&lt;/sub&gt; (.05)</td>
</tr>
<tr>
<td>Adaptive Functioning</td>
<td>2.07 (.06)</td>
<td>2.10 (.06)</td>
<td>2.14 (.05)</td>
</tr>
<tr>
<td>Positive Prognosis</td>
<td>2.42&lt;sub&gt;c&lt;/sub&gt; (.08)</td>
<td>2.00&lt;sub&gt;d&lt;/sub&gt; (.08)</td>
<td>1.80&lt;sub&gt;d&lt;/sub&gt; (.06)</td>
</tr>
</tbody>
</table>

*Note:* Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different subscripts differ significantly at p < .05.

**Differences in Children’s Conceptions of Mental Illness for Varying Types of Psychopathology**

To establish whether children’s conceptions of mental illness varied as a result of the type of behavior displayed in the vignettes, a doubly multivariate repeated measures ANCOVA was conducted using the positive beliefs of mental illness composite score and the four causality component scores as dependent variables. Grade served as the between-subjects factor and the five mental illness vignettes (i.e., normal, depressed, anxiety disorder, conduct disorder, psychosis) served as within-subjects factors. Wilks’ criterion confirmed a significant multivariate effect for both grade, $F(10, 304) = 9.55, p = .00, \eta^2 = .24$ and vignette, $F(20, 137) = 2.27, p = .00, \eta^2 = .25$, and a significant grade X vignette interaction, $F(40, 274) = 3.58, p = .00, \eta^2 = .34$. Follow-up univariate $F$ tests with Greenhouse-Geisser corrected degrees of freedom for each individual dependent variable on the within-subjects factor of vignette revealed that

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<sup>4</sup> Note that the repeated measures analysis was conducted across the within-subjects factor and not across time.

<sup>5</sup> Greenhouse-Geisser statistics were examined because the repeated measures assumption of sphericity was violated.
only the positive beliefs of mental illness composite score attained statistical significance, \( F(4, 624) = 6.49, p = .00, \eta^2 = .17 \). Further analyses of each individual vignette using a Bonferroni adjusted alpha revealed that the vignettes were statistically significant from one another, \( F(4, 153) = 258.46, p = .00, \eta^2 = .97 \). Specifically, the vignettes were ordered with the positive beliefs of mental illness composite score being highest for the normal vignette character (\( M = 4.24 \)), followed by the anxious vignette character (\( M = 2.85 \)), the psychotic character (\( M = 2.69 \)), the depressed character (\( M = 2.00 \)), and finally the conduct-disordered vignette character (\( M = 1.65 \)).

Follow-up univariate \( F \) tests with Greenhouse-Geisser corrected degrees of freedom for each individual dependent variable on the vignette X grade interaction revealed a significant positive beliefs of mental illness composite score, \( F(8, 624) = 6.12, p = .00, \eta^2 = .16 \), and significant attributions to physical/biological causes, \( F(8, 624) = 2.06, p < .05, \eta^2 = .03 \), dispositional causes, \( F(8, 624) = 3.72, p < .01, \eta^2 = .05 \), social environmental causes, \( F(8, 624) = 2.96, p < .01, \eta^2 = .04 \), and psychological illness causes \( F(8, 624) = 8.16, p = .00, \eta^2 = .10 \). These results suggest significant age changes in positive beliefs and causes of psychopathology depending on the specific type of dysfunctional behavior presented.

To examine more specifically what types of mental illness participants were responding to, significant vignette X grade interactions for each dependent variable were decomposed by analyzing the simple main effects of the vignettes for each grade separately. Table 6 presents adjusted means, standard errors, and pairwise comparisons of the simple main effects of the vignette X grade interaction for the positive beliefs of mental illness composite score. As shown, positive beliefs of mental illness were highest across all participants for the normal vignette character and lowest for the conduct-disordered character. Mental illness composite scores for the depressed, anxious, and psychotic vignette characters varied in order depending on
participant grade. A secondary set of post hoc analyses conducted to examine the simple main effects of grade for each vignette separately demonstrated significant decreases from grades one to seven in positive beliefs of mental illness for the normal, depressed, conduct-disordered, and psychotic vignette characters (see Table 6).

Table 6

*Descriptive Statistics of the Positive Beliefs of Mental Illness Composite Score Vignette X Grade Interaction*

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Depressed</th>
<th>Anxious</th>
<th>Conduct</th>
<th>Psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>n = 42</td>
<td>4.60_{a1}</td>
<td>2.08_{b4}</td>
<td>2.94_{c}</td>
<td>1.75_{d6}</td>
</tr>
<tr>
<td></td>
<td>(.06)</td>
<td>(.09)</td>
<td>(.06)</td>
<td>(.05)</td>
<td>(1.00)</td>
</tr>
<tr>
<td>Grade 4</td>
<td>n = 47</td>
<td>4.24_{a2}</td>
<td>2.07_{b4}</td>
<td>2.80_{g}</td>
<td>1.64_{h}</td>
</tr>
<tr>
<td></td>
<td>(.05)</td>
<td>(.06)</td>
<td>(.08)</td>
<td>(.05)</td>
<td>(.09)</td>
</tr>
<tr>
<td>Grade 7</td>
<td>n = 71</td>
<td>3.88_{h3}</td>
<td>1.85_{i5}</td>
<td>2.80_{j}</td>
<td>1.56_{k7}</td>
</tr>
<tr>
<td></td>
<td>(.04)</td>
<td>(.05)</td>
<td>(.07)</td>
<td>(.04)</td>
<td>(.08)</td>
</tr>
</tbody>
</table>

*Note:* Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different alphabetical subscripts differ significantly at $p < .05$. Within columns, means with different numerical subscripts differ significantly at $p < .05$.

Table 7 presents adjusted means, standard errors, and pairwise comparisons of the simple main effects of the vignette X grade interaction for the physical/biological causality composite score. As shown, the psychotic vignette character received the highest scores among all participants, signifying a greater acceptance of physical/biological causes as an explanation for the psychotic behavior of the central figure. The remaining four vignettes were ordered identically within each of the grades, with the depressed vignette character receiving the next highest scores, followed by the anxious, conduct-disordered, and normal vignette characters (see Table 7).
Post hoc analyses examining the simple main effects of grade for each vignette separately showed significant differences in attributions of physical/biological causality between grades one and four among the normal, depressed, anxious, and conduct-disordered vignette characters. However, no significant change occurred between grades four and seven for each of these vignettes. These findings suggest that overall, grade one participants make greater use of physical/biological etiological theories in their explanations of various types of psychopathology.

Table 7

*Descriptive Statistics of the Physical/Biological Causality Composite Score Vignette X Grade Interaction*

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Depressed</th>
<th>Anxious</th>
<th>Conduct</th>
<th>Psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>n = 42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.95₁</td>
<td>2.06₃</td>
<td>2.06₅</td>
<td>2.0₃₇</td>
<td>2.1₃</td>
</tr>
<tr>
<td></td>
<td>(.10)</td>
<td>(.12)</td>
<td>(.11)</td>
<td>(.12)</td>
<td>(.13)</td>
</tr>
<tr>
<td>Grade 4</td>
<td>n = 47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5₀₂</td>
<td>1.6₈₄</td>
<td>1.₆₁₆₆</td>
<td>1.₅₆₈₈</td>
<td>1.₉₅₉₅</td>
</tr>
<tr>
<td></td>
<td>(.10)</td>
<td>(.11)</td>
<td>(.10)</td>
<td>(.11)</td>
<td>(.12)</td>
</tr>
<tr>
<td>Grade 7</td>
<td>n = 71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.₃₆₉₂</td>
<td>1.₆₇₄₄</td>
<td>1.₆₂₆₆</td>
<td>1.₆₁₈₈</td>
<td>2.₀₈₉₅</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.09)</td>
<td>(.08)</td>
<td>(.09)</td>
<td>(.10)</td>
</tr>
</tbody>
</table>

*Note:* Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different alphabetical subscripts differ significantly at $p < .05$. Within columns, means with different numerical subscripts differ significantly at $p < .05$.

Table 8 presents adjusted means, standard errors, and pairwise comparisons of the simple main effects of the vignette X grade interaction for the dispositional causality composite score. As shown, the conduct-disordered vignette character received the highest scores across all grades, suggesting a greater acceptance among participants of dispositional (or personality) causes as an explanation for the dysfunctional behavior displayed by the conduct-disordered vignette character. For participants in grades one and seven, next highest dispositional scores
included the depressed, normal, psychotic, and anxious vignette characters, respectively. Grade four participants ordered vignette characters slightly differently; for example, the depressed vignette character had the next highest dispositional score, followed by the psychotic, anxious, and normal vignette characters.

Secondary post hoc analyses examining the simple main effects of grade for each vignette separately revealed a significant rise in attributions to disposition for the normal vignette character between grades four and seven. Further, from grades one to seven, attributions to dispositional causes decreased considerably for both the conduct-disordered and psychotic vignette characters, signifying that grade one participants were most likely to use dispositional etiological theories to explain these types of psychopathology.

Table 8

Descriptive Statistics of the Dispositional Causality Composite Score Vignette X Grade Interaction

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Depressed</th>
<th>Anxious</th>
<th>Conduct</th>
<th>Psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>n = 42</td>
<td>1.16a (.08)</td>
<td>1.69b (.15)</td>
<td>1.28ac (.08)</td>
<td>3.63d3 (.22)</td>
</tr>
<tr>
<td>Grade 4</td>
<td>n = 47</td>
<td>1.04e1 (.07)</td>
<td>1.70f (.14)</td>
<td>1.10e (.07)</td>
<td>3.05g (.21)</td>
</tr>
<tr>
<td>Grade 7</td>
<td>n = 71</td>
<td>1.27h2 (.06)</td>
<td>1.82i (.12)</td>
<td>1.12h (.06)</td>
<td>2.69j4 (.17)</td>
</tr>
</tbody>
</table>

Note: Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different alphabetical subscripts differ significantly at p < .05. Within columns, means with different numerical subscripts differ significantly at p < .05.

Table 9 presents adjusted means, standard errors, and pairwise comparisons of the simple main effects of the vignette X grade interaction for the social/environmental causality composite
score. The table indicates a lack of consensus across participants regarding the order in which vignettes were best explained by social/environmental causes. For example, the depressed vignette character had the highest scores among grade one participants, indicating a greater acceptance of social or environmental causes as an explanation for the depressed behavior of the central vignette character. For grade ones, social/environmental causes were the least likely explanation for the behavior of the normal vignette character. Among grade four participants, the conduct-disordered vignette character had the highest social/environmental scores and the normal character had the lowest. Finally, participants in grade seven perceived social/environmental causes as the best explanation for the behavior of the conduct-disordered vignette character and the least likely explanation for the behavior of the anxious vignette character.

The secondary set of post hoc analyses examining the simple main effects of grade for each vignette separately provided further information regarding participants’ use of social/environmental attributions. Specifically, there was a significant decrease in attributions to social/environmental causes between grades one and four for the depressed vignette character and a subsequent rise from grade four to grade seven. Further, attributions to social/environmental causes increased for the conduct-disordered character between grades four and seven and decreased for the psychotic vignette character between grades one and four. Clearly, social/environmental attributions vary in etiological importance depending on both grade and type of psychopathological dysfunction.
Table 9

Descriptive Statistics of the Social/Environmental Causality Composite Score Vignette X Grade Interaction

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Depressed</th>
<th>Anxious</th>
<th>Conduct</th>
<th>Psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>n = 42</td>
<td>1.78\textsubscript{a}</td>
<td>2.42\textsubscript{b1}</td>
<td>1.84\textsubscript{d}</td>
<td>2.28\textsubscript{b}</td>
</tr>
<tr>
<td></td>
<td>(.11)</td>
<td>(.12)</td>
<td>(.10)</td>
<td>(.12)</td>
<td>(.10)</td>
</tr>
<tr>
<td>Grade 4</td>
<td>n = 47</td>
<td>1.72\textsubscript{c}</td>
<td>2.07\textsubscript{d2}</td>
<td>1.59\textsubscript{ce}</td>
<td>2.11\textsubscript{d3}</td>
</tr>
<tr>
<td></td>
<td>(.10)</td>
<td>(.11)</td>
<td>(.10)</td>
<td>(.11)</td>
<td>(.09)</td>
</tr>
<tr>
<td>Grade 7</td>
<td>n = 71</td>
<td>1.82\textsubscript{f}</td>
<td>2.39\textsubscript{g1}</td>
<td>1.63\textsubscript{h}</td>
<td>2.46\textsubscript{g4}</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.09)</td>
<td>(.08)</td>
<td>(.09)</td>
<td>(.07)</td>
</tr>
</tbody>
</table>

Note: Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different alphabetical subscripts differ significantly at $p < .05$. Within columns, means with different numerical subscripts differ significantly at $p < .05$.

Table 10 presents adjusted means, standard errors, and pairwise comparisons of the simple main effects of the vignette X grade interaction for the psychological illness causality composite score. Overall, participants showed little agreement regarding the order in which vignettes were best explained by psychological illness causes. Among grade one participants, the depressed vignette character had the highest psychological illness score, followed by the anxious, psychotic, conduct-disordered, and normal vignette characters. In contrast, grade seven participants granted the highest psychological illness score to the psychotic vignette character, followed by the anxious, conduct-disordered, depressed, and normal vignette characters. The order of vignette characters differed once again for grade four participants, although consensus was reached that psychological illness causes were the least likely explanation for the behavior of the normal vignette character.
Subsequent post hoc analyses examining the simple main effects of grade for each vignette separately demonstrated that only the anxious and psychotic vignette characters differed significantly across grades. Specifically, there was a significant increase in attributions to psychological illness from grade four to grade seven for the anxiety disordered vignette character and a significant increase from grades one to seven for the psychotic vignette character. These findings indicate that with age, participants recognized psychological illness explanations as the most likely cause of various types of psychopathology.

Table 10

*Descriptive Statistics of the Psychological Illness Causality Composite Score Vignette X Grade Interaction*

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Depressed</th>
<th>Anxious</th>
<th>Conduct</th>
<th>Psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>$n = 42$</td>
<td>1.31&lt;sub&gt;a&lt;/sub&gt;</td>
<td>2.13&lt;sub&gt;b&lt;/sub&gt;</td>
<td>1.89&lt;sub&gt;b&lt;/sub&gt;</td>
<td>1.77&lt;sub&gt;b&lt;/sub&gt;</td>
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<tr>
<td></td>
<td>( .11 )</td>
<td>( .19 )</td>
<td>( .16 )</td>
<td>( .18 )</td>
<td>( .19 )</td>
</tr>
<tr>
<td>Grade 4</td>
<td>$n = 47$</td>
<td>1.21&lt;sub&gt;c&lt;/sub&gt;</td>
<td>1.77&lt;sub&gt;d&lt;/sub&gt;</td>
<td>1.64&lt;sub&gt;d1&lt;/sub&gt;</td>
<td>1.77&lt;sub&gt;d&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>( .10 )</td>
<td>( .18 )</td>
<td>( .15 )</td>
<td>( .17 )</td>
<td>( .18 )</td>
</tr>
<tr>
<td>Grade 7</td>
<td>$n = 71$</td>
<td>1.41&lt;sub&gt;f&lt;/sub&gt;</td>
<td>2.12&lt;sub&gt;g&lt;/sub&gt;</td>
<td>2.19&lt;sub&gt;g2&lt;/sub&gt;</td>
<td>2.15&lt;sub&gt;g&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>( .08 )</td>
<td>( .15 )</td>
<td>( .12 )</td>
<td>( .14 )</td>
<td>( .14 )</td>
</tr>
</tbody>
</table>

*Note:* Means are adjusted for the effect of the covariate. Standard errors appear in parentheses. Within rows, means with different alphabetical subscripts differ significantly at $p < .05$. Within columns, means with different numerical subscripts differ significantly at $p < .05$.

*Relations of Social Perspective Coordination and Emotional Understanding to Dimensions of Children's Conceptions of Mental Illness*

A series of correlations with the effects of verbal ability partialled out were used to measure the associations among social perspective coordination and emotional understanding to
dimensions of children’s conceptions of mental illness. Results of the correlational analysis presented in Table 11 illustrate that several significant relationships were found.

For example, the positive beliefs of mental illness composite and each of three causality composites were moderately negatively correlated with both social perspective coordination and emotional understanding. The one exception, that of psychological illness causes, was significantly positively correlated with social perspective coordination. As well, the CPPI subscale of liking and friendship was positively correlated with both physical/biological and social/environmental attributions of causality and negatively correlated with social perspective coordination. In a similar vein, the CPPI subscale of positive prognosis was positively correlated with physical/biological attributions of causality and negatively correlated to psychological illness attributions and both social perspective coordination and emotional understanding. All of the causality composites correlated positively with one another but negatively with social perspective coordination and emotional understanding among those that reached statistical significance. Taken together, these findings generally reflect that with greater social-cognitive maturity children perceive the mentally ill vignette characters in terms that are less positive.

Finally, social perspective coordination and emotional understanding were significantly positively correlated at a moderate level, indicating that although these social-cognitive skills share some common variance, they also each have a fair amount of unique variance.
Table 11

Partial Correlations among Social Perspective Coordination, Emotional Understanding, and Dimensions of Conceptions of Mental Illness

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>1. Mental Illness Composite</td>
<td>2.27</td>
<td>.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Liking and Friendship</td>
<td>2.24</td>
<td>.45</td>
<td>.83**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Adaptive Functioning</td>
<td>2.11</td>
<td>.39</td>
<td>.75**</td>
<td>.49**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Positive Prognosis</td>
<td>2.52</td>
<td>.71</td>
<td>.85**</td>
<td>.53**</td>
<td>.44**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Physical/Biological Causes</td>
<td>1.78</td>
<td>.55</td>
<td>.19*</td>
<td>.28**</td>
<td>-.04</td>
<td>.19*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Dispositional Causes</td>
<td>1.78</td>
<td>.55</td>
<td>.06</td>
<td>.03</td>
<td>.03</td>
<td>.08</td>
<td>.33**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Social/Environmental Causes</td>
<td>1.93</td>
<td>.48</td>
<td>.13</td>
<td>.24**</td>
<td>-.07</td>
<td>.12</td>
<td>.65**</td>
<td>.28**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Psychological Illness Causes</td>
<td>2.06</td>
<td>.87</td>
<td>-.12</td>
<td>.02</td>
<td>-.11</td>
<td>-.18*</td>
<td>.21**</td>
<td>.02</td>
<td>.43**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Social Perspective Coordination</td>
<td>2.00</td>
<td>.28</td>
<td>-.23**</td>
<td>.14*</td>
<td>.13</td>
<td>-.41**</td>
<td>-.34**</td>
<td>-.27**</td>
<td>-.04</td>
<td>.31**</td>
<td></td>
</tr>
<tr>
<td>10. Emotional Understanding</td>
<td>84.56</td>
<td>7.56</td>
<td>-.13</td>
<td>-.06</td>
<td>.01</td>
<td>-.21**</td>
<td>-.31**</td>
<td>-.24**</td>
<td>-.08</td>
<td>.10</td>
<td>.34**</td>
</tr>
</tbody>
</table>

* ** p < .01 (1-tailed). * p < .05 (1-tailed).
In order to explore further the links among these variables, a series of linear hierarchical regression analyses were conducted to explore the contribution of social perspective coordination and emotional understanding to dimensions of children’s conceptions of mental illness. To control for individual differences verbal ability and gender were entered into the analysis as a block on the first step. Scores from the Relationship Questionnaire and the Emotional Understanding Interview were entered as a block on the second step. Based on the magnitude of the partial correlations, the positive prognosis subscale and the physical/biological, dispositional, and psychological illness causality composite scores were entered as criterion variables in each individual regression. Table 12 presents the results of these analyses.

In the first regression analysis, which examined the influence of social perspective coordination and emotional understanding on estimates of positive prognosis, the combined influence of verbal ability and gender at the first step accounted for 4% of the variance in positive prognosis scores, $F(2, 157) = 2.81, p > .01$. On the second step however, the model (now with four predictor variables) accounted for 21% of the variance in positive prognosis, $F(4, 155) = 9.97, p = .00$. The unique contribution of social perspective coordination and emotional understanding was statistically significant ($R^2 = .17, p = .00$).

The second regression examined social perspective coordination and emotional understanding as predictors of physical/biological attributions of causality. In this analysis, the combined influence of verbal ability and gender at the first step accounted for 6% of the variance in physical/biological attributions, $F(2, 157) = 4.81, p < .01$. On the second step, the model with four predictor variables accounted for 20% of the variance in physical/biological attributions of causality, $F(4, 155) = 9.20, p = .00$. The unique contribution of social perspective coordination and emotional understanding was statistically significant ($R^2 = .14, p = .00$).

In the third regression analysis, which examined the influence of social perspective coordination and emotional understanding on dispositional attributions of causality, the
combined influence of verbal ability and gender at the first step accounted for 3% of the variance in dispositional attributions, $F(2, 157) = 2.15, p > .01$. On the second step, the model accounted for 11% of the variance in dispositional attributions of causality, $F(4, 155) = 4.89, p < .01$. In this analysis, the unique contribution of social perspective coordination and emotional understanding was statistically significant ($R^2_A = .09, p < .01$).

The fourth and final regression examined social perspective coordination and emotional understanding as predictors of psychological illness attributions of causality. In this analysis, the combined influence of verbal ability and gender at the first step accounted for 4% of the variance in physical/biological attributions, $F(2, 157) = 2.96, p > .01$. On the second step however, the four predictor variable model accounted for 14% of the variance in psychological illness explanations, $F(4, 155) = 6.23, p = .00$. The unique contribution of social perspective coordination and emotional understanding was statistically significant ($R^2_A = .10, p = .00$).
Table 12

Summary of Hierarchical Regression Analysis for Variables Predicting Dimensions of Children’s Conceptions of Mental Illness

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Positive Prognosis</th>
<th>Physical/Biological Causes</th>
<th>Dispositional Causes</th>
<th>Psychological Illness Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( \text{Sig.} , t )</td>
<td>( \beta )</td>
<td>( \text{Sig.} , t )</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.046</td>
<td>.562</td>
<td>-.228</td>
<td>.004</td>
</tr>
<tr>
<td>Verbal Ability</td>
<td>-.174</td>
<td>.030</td>
<td>-.113</td>
<td>.151</td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
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<td>.232</td>
<td>-.176</td>
<td>.019</td>
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<tr>
<td>Verbal Ability</td>
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<td>.111</td>
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<td>.309</td>
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<tr>
<td>Social Perspective Coordination</td>
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<td>.000</td>
<td>-.266</td>
<td>.001</td>
</tr>
<tr>
<td>Emotional Understanding</td>
<td>-.096</td>
<td>.218</td>
<td>-.186</td>
<td>.018</td>
</tr>
</tbody>
</table>
Discussion

The purpose of the present study was to provide a first step in the integration of our efforts to understand more clearly children's conceptions of mental illness. As an extension of previous research in this area, age changes in various dimensions of children's conceptions of mental illness were examined in relation to established indices of social-cognitive development, those of social perspective coordination and emotional understanding, to determine whether conceptions are associated with concomitant levels of development in these constructs. Further, social perspective coordination and emotional understanding were explored as potential mechanisms underlying children's conceptions of psychopathology to determine the relative ability of these constructs in predicting maturity in mental illness concepts. To this end, children in grades one, four, and seven were read a series of mental illness vignettes to investigate whether their conceptions of mental illness (i.e., recognition of adaptive functioning, estimations of positive prognosis, attributions of causality, and attitudes toward peers with mental illness) were associated with social perspective coordination and emotional understanding.

Overall, the findings of the present study replicate and extend the existing literature in several ways. The existence of both consistencies and inconsistencies add depth to the previous research and suggest new ways of understanding children's conceptions of mental illness. This final chapter reviews specific findings, outlines strengths and limitations of the study, and offers suggestions for further empirical research.

Differences in Dimensions of Children's Conceptions of Mental Illness, Social Perspective Coordination, and Emotional Understanding

In examining differences in children's conceptions of mental illness and social-cognitive development, the present research revealed a significant effect of both grade and gender. Specifically, increases across grades in both social perspective coordination and emotional understanding demonstrated that older children were more sophisticated in their perspective
taking and emotional understanding skills than were younger children. These results are in accord with considerable evidence demonstrating age-related changes in the development of these constructs with respect to the utilization of more in-depth and abstract social and affective perspective taking (Carroll & Steward, 1984; Donaldson & Westerman, 1986; Fischer et al., 1990; Harris et al., 1981; Hughes & Dunn, 1998; Selman & Byrne, 1974). The strength of these effects varied from moderate to extremely substantial, establishing further that meaningful age changes occur from grades one to seven in social perspective coordination and emotional understanding.

The findings of this study also revealed a significant decrease of moderate effect across grades for the positive beliefs of mental illness composite score. Recall that higher mental illness composite scores do not denote a conception of “more” mental illness but rather reflect a more positive impression of the central figure. The results of this study therefore suggest that with age, and hence, increased social perspective coordination and emotional understanding, children conceive of others with mental illness in terms that are less positive. Although this finding may initially appear counterintuitive (i.e., more developed social-cognitive skills should correspond with positive conceptions of mental illness), further reflections indicate a concurrence with previous research, as illuminated next by an examination of the mental illness composite subscales.

Recall that the positive beliefs of mental illness composite score was computed by summing the subscales of liking and friendship, adaptive functioning, and positive prognosis to create a score representing an overall understanding of mental illness. Higher scores on the liking and friendship scale indicated positive feelings of liking and friendship towards the vignette central figures. Higher scores on the positive prognosis scale indicated positive predictions of prognosis for the future. Finally, higher scores on the adaptive functioning subscale reflected more positive impressions about the behavior of the central figures and hence,
less severity of dysfunction. The current data revealed a statistically significant decrease across grades for the positive prognosis subscale, results that generally converge with prior research conducted by Hoffman et al. (1977), Marsden and Kalter (1976), and Smith and Williams (2001). Moreover, the liking and friendship subscale decreased across grades, indicating that despite greater social perspective taking skills and emotion knowledge with age, significant decreases in liking and friendship persist. In fact, liking and friendship scores were not particularly high even among the earliest grade assessed in this study, advancing the view that even young children regard their psychologically disturbed peers with dislike and rejection (Novak, 1974; Poster et al., 1986; Weiss, 1986, 1994).

This study extended previous research on age differences in children’s etiological theories by demonstrating a significant increase of sizeable effect for attributions to psychological illness and significant decreases of moderate effect for attributions to physical/biological and dispositional explanations of dysfunctional behavior. These findings contribute to our existing understanding of children’s etiological theories of mental illness by suggesting that with age and in relation to social-cognitive development, children’s theories evolve from simplistic cause-and-effect attributions of causality (such as those defined by physical/biological and dispositional attributions) to psychological explanations (Chassin & Coughlin, 1983; Coie & Pennington, 1976; Diamond, 1993; Dollinger et al., 1980). Such findings make intuitive sense if one considers that social perspective coordination and emotion knowledge also shift from a focus on external situational cues and overt characteristics to internal mental cues over the course of development (Harris et al., 1981; Selman, 1980). Further, these findings nicely concur with the contentions of Berndt and Berndt (1975), who argue that young children routinely attempt to explain behavior in terms of proximal determinants while older children look beyond the immediate horizons to find explanations in increasingly more remote circumstances.
In the present study, boys and girls did not differ in their conceptions of mental illness, a finding that complements previous research indicating an overall lack of gender differences in children’s conceptions of psychopathology (see Coie & Pennington, 1976; Hoffman et al., 1977; Marsden & Kalter, 1976; Norman & Malla, 1983; Novak, 1974; Secker et al., 1999). However, it was demonstrated that girls had significantly higher emotional understanding scores, results consistent with prior research on the understanding of emotional and affective perspective-taking (Bosacki & Astington, 1999; Brody, 1985; Cook et al., 1994; Cutting & Dunn, 1999; Dunn et al., 1991; Hatcher, Hatcher, Berlin, Okla, & Richards, 1990; Hughes & Dunn, 1998). In contradiction to findings reported by Schultz and Selman (2000b) however, no gender differences emerged in social perspective coordination, though girls had slightly higher scores as observed in previous research. However, the considerable difference in sample sizes between the present study \((N = 160)\) and that conducted by Schultz and Selman \((N = 2,046)\) provides a plausible explanation for the divergent findings, particularly when considering that gender differences in social perspective coordination fell just short of statistical significance \((p = .054)\).

Lastly, these results broaden our understanding of gender differences children’s attributions of causality by revealing that boys make significantly greater attributions of dysfunctional behavior to physical/biological and dispositional causes than girls. One explanation for the increased use of attributions to physical/biological and dispositional causes among boys may be linked to their social-cognitive development. As observed previously, the results of this study generally parallel the finding that girls typically outscore boys on measures of social perspective taking and emotional understanding. Perhaps boys’ lower perspective taking and emotional understanding scores predisposed them to respond to the proximal characteristics salient in physical/biological and dispositional etiological theories. Further research on gender differences in attributions of causality are clearly needed to examine this hypothesis further and provide additional explanations for this finding.
Differences in Conceptions of Mental Illness as a Factor of Mental Illness Type

In examining differences in children’s conceptions of mental illness due to the type of mental illness displayed (i.e., normal, depressed, anxious, conduct-disordered, psychotic), the present research revealed significant multivariate effects of grade and vignette type as well as a significant interaction. Subsequent analyses revealed a significant decrease of large effect in the positive beliefs of mental illness composite score across the vignettes. Further, it was demonstrated that the vignettes were significantly different from one another. The strength of this effect was substantial, augmenting the findings of previous research indicating that children’s conceptions of mental illness vary with respect to the type of dysfunctional behavior displayed (see Kazdin et al., 1984; Maas et al., 1978; Marsden et al., 1977; Roberts et al., 1981; Spitzer & Cameron, 1995). Notably, positive beliefs of mental illness composite scores were highest for the normal vignette character and lowest for the conduct-disordered vignette character, signifying that participants perceived the conduct-disordered character as more severe, less likeable, and with a poorer long-term prognosis than any other vignette. Indeed, the conduct-disordered vignette character was perceived more negatively than even the character described as psychotic. Previous hypotheses to explain such findings have suggested that children view the aggressive behavior of the conduct-disordered character as more indicative of a problem and potentially more harmful to themselves (Roberts et al., 1981; Spitzer & Cameron, 1995). These findings also lend support to those of Socall and Holtgraves (1992) who argue that rejection of a mental illness is associated with negative conceptions and beliefs about that mental illness. Finally, given the prevalence of various childhood psychopathologies, one could further posit that children are more likely to encounter peers with conduct-disorder than those with childhood psychosis (Mash & Wolfe, 2002), resulting in personal experiences likely to negatively influence their conception of this disorder.
Subsequent analyses of the grade by vignette interaction effects also revealed changes in the positive beliefs of mental illness composite score. Specifically, the results demonstrated that across grades, the normal vignette character was perceived most positively and the conduct-disordered character was judged most negatively. These findings confirm that regardless of age, participants perceive antisocial behavior as most demonstrative of mental illness in terms of adaptive functioning, prognosis, and likeability. However, the findings also demonstrated significant decreases across grades in positive conceptions of mental illness for varying types of mental illness. Specifically, with age, participants viewed the depressed, conduct-disordered, and psychotic vignette characters in significantly less positive terms.

The interaction also demonstrated that the particular type of dysfunctional behavior under consideration affected age differences in children's conceptions of causality. That is, physical/biological, dispositional, social/environmental, and psychological attributions of causality were shown to differ by mental illness type. Across all grades, participants consistently judged physical/biological causes (e.g., difficulties at birth, doctor malpractice, accidents resulting in brain damage) to be likely explanations for the behavior of the psychotic vignette character, a finding replicating that of Chassin and Coughlin (1983). Given the connection between biological insult (e.g., birth complications, brain abnormality) and the development of psychosis (Mash & Wolfe, 2002), it is clear that even the youngest children in this study had an appropriate understanding of biological contributions to severe forms of mental illness. Indeed, the findings revealed that grade one participants made the greatest use of physical/biological explanations for various types of psychopathology, providing further evidence to research suggesting that young children's etiological theories center around simplistic cause-and-effect explanations of behavior (Chassin & Coughlin, 1983; Coie & Pennington, 1976; Diamond, 1993; Dollinger et al., 1980).
The interaction results also revealed an increased use of reference across all grades to dispositional causes as an explanation for the behavior of the conduct-disordered character, suggesting a belief in an element of autonomy in antisocial behavior. Indeed, Maas and colleagues (1978) reported that participants in their study tended to perceive the antisocial character as enjoying the rewards of disruptive behavior. Moreover, their participants perceived the persistence of antisocial behavior as largely due to lack of efforts to change. Given the consensus across all grades to perceive the conduct-disordered character as “bad”, and among the grade one participants in particular, a similar conclusion might be drawn in the results of the present study (see also Kazdin et al., 1984).

A general lack of consensus across grades was observed for social/environmental explanations of dysfunctional behavior. For example, among participants in the first grade, the depressed vignette character had the highest social/environmental scores, whereas the conduct-disordered character had the highest social/environmental scores among grade four and seven participants. Perhaps these findings reflect age-related changes in the understanding of social and environmental influences on dysfunctional behavior, as suggested by Chassin and Coughlin (1983). For example, some research suggests that young children typically cite peer rejection as an explanation for feelings of sadness (Hughes & Dunn, 2002). In the present study, social explanations were the only attributions containing reference to peer rejection. Perhaps the salience of this feature drew the consideration of the youngest participants in this study in their attempts to explain the behavior of the depressed vignette character. Conversely, the results demonstrated that, though all participants referred to dispositional factors in their explanations of antisocial behavior, only grade four and seven participants further conceded that social factors were plausible explanations for the behavior of the conduct-disordered vignette character. It is conceivable that the older participants in this study recognized that social factors (e.g., parents
arguing, physical abuse, and peer rejection) might account for another child becoming or behaving “bad”.

With respect to psychological illness explanations, all participants perceived that the behavior of the normal vignette character was least likely to be explained by a psychological illness. Moreover, the results showed a consistent and significant age-related increase in the use of psychological illness explanations across different types of psychopathology. Specifically, both grade four and grade seven participants attributed psychological illness explanations to the behavior of the anxious and psychotic vignette characters. Indeed, younger children may have neither the cognitive sophistication nor the experience to render such an explanation. As noted by previous researchers (e.g., Chassin & Coughlin, 1983; Coie & Pennington, 1976), the use of psychological illness attributions to explain psychotic behavior generally reflects a more sophisticated understanding of abnormal behavior as related to unobservable, internal mental states and the shift from concrete to abstract when describing the behaviors of others (Lewis, 1993).

Social Perspective Coordination and Emotional Understanding as Predictors of Dimensions of Children’s Conceptions of Mental Illness

One unique contribution of this study was to place children’s conception of mental illness within a theoretical framework. This included examining the ways in children’s levels of social perspective coordination and emotional understanding were associated with different dimensions of their mental illness concepts. In this vein, a series of analyses examined the links among social perspective coordination, emotional understanding, positive beliefs of mental illness, and attributions of mental illness causality. Partial correlations revealed several significant relationships in the expected direction, in accord with previous research, and at magnitudes typical in the examination of social-cognitive variables of this nature (e.g. Bosacki & Astington, 1999; Cutting & Dunn, 1999; Turnbull et al., 2004).
First, a moderate significant positive correlation between social perspective coordination and emotional understanding provided ancillary support for the sophisticated link between the cognitive and affective dimensions of development and the importance of examining these interconnections further (Carlo, Knight, Eisenberg, & Rotenberg, 1991; Carroll & Steward, 1984; Denham, 1986; Dunn et al., 1991; Turnbull et al., 2004). Second, moderately negative correlations revealed that as estimates of positive prognosis decrease, social and affective perspective taking increase. Though caution should naturally be exercised in suggesting causal links from these correlational data, taken together the findings may suggest that more sophisticated social perspective taking and emotion knowledge skills provide children an ability to recognize the long-term consequences often associated with psychopathology. That is, given that sizeable difficulties exist throughout the lifespan for many children diagnosed with a mental illness (Costello & Angold, 2000), conceptions of mental illness outcomes appear to become more realistic with respect to prognosis as children age, despite these conceptions necessarily involving a more “negative” perception.

Further, sophisticated levels of social perspective coordination and emotional understanding were associated with lower physical/biological and dispositional attributions of causality. In contrast, a more mature level of social perspective coordination was associated with higher psychological illness attributions. These findings support research by Selman (1980) and Harris et al. (1981) who posit that immature social-cognitive reasoners cannot differentiate between the physical and psychological characteristics of others. While immature reasoners are bound to concrete events when interpreting others’ perspectives and emotions, more mature reasoners recognize that visible reactions are an unreliable guide to inner mental states and acknowledge the importance of psychological factors.

Finally, it should be recognized that the interrelationships observed among the causality variables suggest complex links in children’s etiological theories of mental illness. For example,
physical/biological explanations of behavior were positively correlated with dispositional causes, social environmental causes and psychological illness causes, signifying the connections that children make between psychopathology caused by physical/biological damage and the impact this impairment has on social, dispositional, and psychological outcomes. Clearly, further research is needed to gain a more detailed understanding of these complex relationships.

An examination of the multiple regression analyses revealed social perspective coordination to be the strongest contributor to estimates of positive prognosis and attributions of physical/biological, dispositional, and psychological illness. Indeed, for each of these dimensions, the addition of social perspective coordination provided a significantly unique contribution independently of the other factors included in the model. Although conclusions regarding developmental change cannot be confirmed without longitudinal research, these findings advance the view that varying dimensions of children's conceptions of mental illness are associated with concomitant levels of social perspective coordination. Certainly, these findings provide further weight to the correlational results suggesting that more sophisticated social perspective coordination is associated with less positive (but more realistic) impressions of prognosis, lower physical/biological and dispositional attributions of causality, and higher psychological illness attributions. Taken together, these findings hint of a transition from external to internal thinking or the "surface to depth" course evident in the development of social cognition in general (see Donaldson & Westerman, 1986; Flavell, 1992; Harris et al., 1981; Selman, 1980).

**Study Strengths and Limitations**

A considerable strength of this study is that it adds to an important area of investigation by examining children's thoughts, beliefs, and attitudes about mental illness. Although some recent research has investigated adult conceptions of psychopathology (e.g., Corrigan & Penn, 1999; Link et al., 1999; Phelan et al., 2000; Socal & Holtgraves, 1992), children's conceptions...
have been largely overlooked for decades (for exceptions see Secker et al., 1999; Spitzer & Cameron, 1995). Second, this investigation drew from several distinct literatures to provide a first step in placing children’s conceptions of mental illness within a theoretical framework. Indeed, previous work in this area has generally assumed an “atheoretical” approach that says little about what developmental constructs might underlie differences in children’s conceptions of mental illness. In a related vein, the majority of past studies have used only the empirical marker of age to explain differences in children’s conceptions with no attempt made to understand or explain age differences in terms of social-cognitive development. This study went beyond such research to provide concrete evidence of the relation between social-cognitive developmental constructs and mental illness concepts.

Third, rigorous data collection methods were firmly adhered to throughout the course of this investigation. For example, research assistants were intensively trained in the administration and scoring of measures. Extreme care was taken to ensure a representative return rate on parental permission slips, thereby minimizing volunteer effects, increasing the generalizability of the findings, and contributing to the relatively large sample size. Finally, as suggested by several previous researchers (e.g., Burbach & Peterson, 1986; Dollinger et al., 1980; Dunn, 1999), receptive verbal ability was assessed and controlled for as a potential confounding variable.

Potential objections to my interpretation of the results of this study include that the observed relations among social-cognitive developmental constructs and dimensions of mental illness concepts are simply artifacts of age. On this criticism, the effects of age should have been partialled out of the correlational and regression analyses. Although this may be the dominant approach to investigating these relations, it is not the only approach. Indeed, as noted by Turnbull et al. (2004), the fact that researchers can tease apart such domains statistically does not necessarily mean they should. Instead, such decisions are often dependent upon one’s conceptual theory of development. A central issue raised in this research is that the majority of
past studies on children’s conceptions of mental illness have used age as a proxy for
development to explain differences in children’s conceptions. As noted previously, age is not an
accurate predictor of cognitive maturity and does not provide strong evidence of the relation
between social-cognitive constructs and mental illness concepts. As such, age was not partialled
out of the statistical analyses in this study to avoid “washing out” or diminishing the effects of
the developmental constructs. No doubt, additional research should take the opposite approach
to examine further the relations of social-cognitive development to conceptions of mental illness.

A second criticism of this study might involve the relatively small correlations among
variables or the relatively small mean differences among groups. To this end, it should be noted
that the majority of correlations were in fact at magnitudes typical in the examination of social-
cognitive variables of this nature (see Bosacki & Astington, 1999; Cutting & Dunn, 1999; Dunn
et al., 1991; Turnbull et al., 2004). With respect to small mean differences, the existence of
substantial effect sizes suggests homogeneous groupings. Indeed, an examination of the standard
deviations for all variables generally revealed minimal amounts of within-group variability.

A third criticism might involve the measure used to investigate children’s conceptions of
mental illness. For example, there was no indication by Kazdin et al. (1984) how the CPPI
questions were formulated. Perhaps the questions used to assess children’s conceptions of
mental illness actually represented adult conceptions of children’s conceptions of mental illness.
Indeed, investigations into children’s conceptions of death (Bering & Bjorklund, 2004), physical
illness (Bibace & Walsh, 1980, 1981), and social deviance (Younger, Schwartzman, &
Ledingham, 1985, 1986) suggest a variety of alternate and intriguing methodologies that should
be considered in future research on children’s conceptions of psychopathology.

Implications and Considerations for Future Research

Certainly, the findings of this study have direct implications for education and mental
health promotion. As mentioned in the introduction, our understanding of children's conceptions
of mental illness is important at both practical and theoretical levels. First, the results of this study indicate that children’s conceptions of mental illness are not inaccurate with respect to notions of prognosis and etiology, and that these conceptions are related to constructs of social-cognitive development. This information can be used to inform clinicians and educators on how to help children contextualize and understand mental disorder. As advised in the pediatric medicine literature (see Bibace & Walsh, 1981), it is crucial to consider children’s perspectives and use explanations consistent with their levels of development if we are to provide them with appropriate information (Dollinger et al., 1980; Kazdin et al., 1984; Roberts et al., 1981; Secker et al., 1999).

Further, as noted briefly in the introduction, children’s conceptions of mental illness have direct implications on their willingness to acknowledge mental illness within themselves and to engage in appropriate treatment (Dollinger et al., 1980; Kazdin et al., 1984; Roberts et al., 1981). Moreover, knowledge of how children conceptualize psychopathology increases the likelihood that professionals implement appropriate interventions immediately and effectively (Burbach & Peterson, 1986). Although this research did not directly investigate incidence rates, the overall prevalence of psychological disorders evident in children ranging from 12% to 22% (Bird, 1996; Mash & Wolfe, 2002; U.S. Department of Health and Human Services, 1999) suggest that a percentage of the children who participated in this study would meet criteria for the diagnosis of a mental illness. It is therefore imperative that we use the information provided by these participants to better inform practice and assist in the design of effective interventions for the benefit of children diagnosed with mental illness.

The overall finding that children regard their psychologically disturbed peers with dislike and rejection, especially when antisocial and aggressive behavior is salient, suggests that children’s attitudes of psychopathology reflect general perceptions of the mentally ill as unpredictable and unlikable. These findings imply a number of ways that health promotion
initiatives with children might be designed to consider their perceptions in addressing the stigmatization of various types of mental illness (Secker et al., 1999). For example, both theory (e.g., Eagly & Chaiken, 1993) and research (Bar-Tal, 1996; Sherif, Harvey, White, Hood, & Sherif, 1961) suggest that the development of children's attitudes toward others are influenced by indirect experiences as well as direct contacts with "attitude objects" (Diamond, 2001). The findings of this study can therefore be used to inform educators as to the importance of creating structured opportunities for children to learn more about various disabilities, not the least of which is mental illness.

Finally, future research should continue cross-sectional designs and initiate longitudinal designs to illuminate further the relations among social perspective coordination, emotional understanding, and dimensions of conceptions of mental illness. Indeed, the importance of longitudinal methodologies is especially relevant in clarifying relationships between social-cognitive development and children's conceptions of different mental illnesses (Lewis, 1993; Shipman & Zeman, 1999). Future research should also be concerned with examining the importance of individual difference variables and their correlates in children's conceptions of mental illness. Indeed, empirical investigations on children's understanding of mental states in general have shown the importance of variables such as family size and background (Cutting & Dunn, 1999), parental attachment (Fonagy & Target, 1997), parental socialization practices (Hughes, Deater-Deckard, & Cutting, 1999), and social competence (Bosacki & Astington, 1999) in influencing social-cognitive development. For example, there is a canon of "theory of mind" studies (for reviews see Astington, Harris, & Olson, 1988; Bartsch & Wellman, 1995; Hala & Carpendale, 1997; Perner, 1991; Wellman, 1990) to suggest the importance of each of these above-mentioned variables in determining the rate and range of mentalizing ability that individual children acquire (Charman, Ruffman, & Clements, 2002). Although theory of mind studies have not dealt centrally with mental illness or psychopathology per se, it is not unlikely
that these same variables affect children's understanding of mental disorder. Especially relevant is the impact that personal experience has on shaping children's conceptions. Support for this claim comes from studies on children's understanding of learning disabilities (Lewis, 1993), mental retardation (Conant & Budoff, 1983), and physical disability (Diamond, 2001; Diamond, Hestenes, Carpenter, & Innes, 1997) that have demonstrated the positive influence that experience and contact has on the cognitive, affective, and behavioral perceptions of others (Eagly & Chaiken, 1993). Although not directly measured in this study, it is possible that differences in children's conceptions of their mentally ill peers arose from differing amounts of experience with various disorders rather than changes in social-cognitive development.

Lastly, it is important to take into account the generalizability of the present findings. Specifically, it is vital to underscore the fact that the majority of children in this study were from predominantly Caucasian, middle-class, intact homes. The influence of cultural and family background differences cannot be overlooked in how children come to understand their mentally ill peers and indeed, explain their social world in general.
References


*Western Journal of Nursing Research, 17*, 398-415.


Appendix A

Participant Recruitment Form
Dear Student:

HELLO – You have been chosen to participate in a project that I am conducting in your school. I am interested in understanding how children think and feel about other children’s behavior. **This is not a test and there are no right or wrong answers.** Only your answers are important.

If you decide to participate in this project, you will be asked to listen to some interesting stories and to look at some pictures about kids acting in different ways and feeling different things. You will then be asked to answer some questions that will help me understand how you think and feel about the kids in each of the stories.

Anything you want to tell me about how you think and feel will be kept very private. That means that **nobody but me will ever know what you say.** Not your teachers, your friends, or your parents will ever know what you tell me about your thoughts and feelings.

If you decide to participate in this project, you may also choose not to answer any question. You may also decide not to be in the project at all, or to drop out of the project at any time. If this is your choice, you will not get into any trouble. If you choose not to participate in the project, you will be given something else to do in class that is related to normal classroom activities.

In order for you to participate in this project, you will need to take home, and bring back to school, a special form for your parents that they must sign. This form lets me know that your parents agree for you to participate in the project. **STUDENTS IN EACH PARTICIPATING CLASSROOM WILL RECEIVE A PIZZA PARTY FOR THEIR COOPERATION (with either a yes or no response for your participation from your parent).** Please do your very best to have it returned to your teacher by TOMORROW.

I hope you agree to be in this project!!

Sincerely,

Cory L. Pedersen
Department of Educational Psychology and Special Education
University of British Columbia
Appendix B

Parent/Guardian Consent Form
Dear Parent(s) or Guardian(s):

I would like to ask your permission for your son/daughter to participate in a research project that I am conducting for my doctoral graduate degree at your child’s school entitled “Investigating Children’s Understanding of Mental Illness.” The Social Sciences and Humanities Research Council of Canada is funding this study to identify how children of varying ages think and feel about the severity, prognosis, and cause of different mental illnesses. A secondary purpose of this project is to better understand how children perceive their peers afflicted with varying types of illness. It is hoped that the results of this study will help practitioners and the research community become better equipped to discuss mental illness with children, as well to understand the ways in which treatment can be improved by considering children’s perspectives. Please see the attached letter from your school principal indicating their support for this project in your child’s school.

Study Procedures:
Students who participate in this study will be asked to listen to a series of stories and to look at a number of pictures of children acting and feeling in different ways. Students will then be asked to answer a series of questions regarding their thoughts and feelings about the child depicted in the stories and pictures. Students will also be asked a series of questions about their background (e.g., age, sex, number of siblings etc) and to complete a short vocabulary test. Finally, home addresses will be accessed via student records to provide me with census information.

Please note that a trained researcher from the University of British Columbia will individually interview participating students in a separate room during regularly scheduled class time. The entire session will take approximately 60 minutes to complete, but may require a second testing session. Participation is voluntary and withdrawal from the study at any time or refusal to participate will not affect class standing or student marks in any way. Students who do not participate will be given a regularly scheduled class assignment to complete.

Confidentiality:
All information collected from this research is strictly confidential, meaning that only the principal investigator and co-investigator will have access to the data. Information will not be revealed to teachers, parents, or any school personnel at any time. Further, all documents (e.g., questionnaires) will be identified only by code number and kept in a locked filing cabinet.
Appendix C

Participant Assent Form
Appendix D

Demographic Cover Sheet
Thank you for helping us do our work by participating in this study. This is called a research study because we want to learn about what children you age think and feel. In this study, you are going to listen to some stories, play some games, and answer some questions to help us learn more about you. You must remember a few things. First, this is NOT a test and there are no right or wrong answers. We only want to know what YOU think. Second, all of your answers are going to be kept secret/confidential. Do you have any questions? Okay, let's begin.

1. PLEASE COMPLETE FOR EACH STUDENT YOU INTERVIEW

<table>
<thead>
<tr>
<th>Interviewers Name:</th>
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<tbody>
<tr>
<td>Students name:</td>
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<tr>
<td>Students Birthdate:</td>
<td>(Day) (Month) (Year)</td>
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<tr>
<td>Please gather from school office</td>
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<tr>
<td>Students Home Address:</td>
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<td>Please gather from school office</td>
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<tr>
<td>Gender (circle one):</td>
<td>Male Female</td>
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<tr>
<td>Teachers Name:</td>
<td></td>
</tr>
<tr>
<td>Grade (circle one):</td>
<td>Grade 1 Grade 4 Grade 7</td>
</tr>
</tbody>
</table>

2. PLEASE ASK EACH STUDENT THE FOLLOWING QUESTIONS.

| Who are all the people you live with at home? | |
| Language spoken at home | |
Appendix E

Peabody Picture Vocabulary Test – Third Edition

(Copyright, 1997)
Appendix F

K-3 Relationship Questionnaire
INTRODUCTION
To be read aloud to the students

The following instructions are suggestions ONLY, designed to give you a sense of how we have presented this questionnaire in the past. We would like teachers to present this questionnaire in a manner they feel is appropriate for their own unique classroom situation.

READ: You are going to hear some stories about animals and how they act. For each story, you will hear some questions about the animals in the story. You must listen closely to what the animals do in the stories so that you can decide if you think what the animals did or said was bad, okay, good or excellent.

If what the animals say or do is bad, circle the sad face. If what the animals say or do is okay, circle the straight face. If what the animals say or do is good, circle the happy face. And if what the animals say or do is excellent, circle the happy face with the star over it.

These questions are to see how ___-graders think. Everyone’s answers will be different, but no one’s answers can be wrong. I want to know what everyone thinks, not just what the person sitting next to you or your friend thinks. So, be sure to answer the way YOU think.

Let’s do the first story together.
The following instructions are suggestions ONLY, designed to give you a sense of how we have presented this questionnaire in the past. We would like teachers to present this questionnaire in a manner they feel is appropriate for their own unique classroom situation.

READ: You are going to hear some stories about animals and how they act. For each story, you will hear some questions about the animals in the story. You must listen closely to what the animals do in the stories so that you can decide if you think what the animals did or said was bad, okay, good or excellent.

If what the animals say or do is bad, circle the sad face. If what the animals say or do is okay, circle the straight face. If what the animals say or do is good, circle the happy face. And if what the animals say or do is excellent, circle the happy face with the star over it.

These questions are to see how ___-graders think. Everyone's answers will be different, but no one's answers can be wrong. I want to know what everyone thinks, not just what the person sitting next to you or your friend thinks. So, be sure to answer the way YOU think.

Let's do the first story together.
**SAMPLE QUESTION**

READ: Find the bell at the top of the page. If you see a bell at the top of the page, you are on the right page. Do not turn the page until I tell you to turn the page.

The first story is called “Fire Drill.”

There was a fire drill at Animal Elementary School. When the fire drill bell rings, everyone is supposed to line up and wait quietly for the teacher’s directions. Listen to what four of the animals did when the fire drill bell rang. Decide if what each animal did was BAD, OKAY, GOOD, or EXCELLENT.

A. Put your finger on the picture of the FOX. When the bell rang, FOX ran out of the class into the hall. Circle the face to show if this was a BAD, OKAY, GOOD, or EXCELLENT thing to do when the fire drill bell rang.

B. Put your finger on the picture of the CHICKEN. When the fire drill bell rang, CHICKEN quietly and quickly lined up to wait for the teacher’s directions. Circle the face to show if this was a BAD, OKAY, GOOD, or EXCELLENT thing to do when the fire drill bell rang.

C. Put your finger on the picture of the PIG. When the fire drill bell rang, PIG ran to line up. Circle the face to show if this was a BAD, OKAY, GOOD, or EXCELLENT thing to do when the fire drill bell rang.

D. Put your finger on the picture of the RABBIT. When the fire drill bell rang, RABBIT talked while walking to the line. Circle the face to show if this was a BAD, OKAY, GOOD, or EXCELLENT thing to do when the fire drill bell rang.

E. Look at the last row with all of the animals. Circle the picture of the animal in that row that did what you would have done. Circle only ONE animal.

Now, let’s go over your answers.
Put your finger on the FOX at the top of the page. Look at the faces in that row. Raise your hand and I will call on someone to tell me which face they circled. (Call on one student.)

ASK: (Name of student), what face did you circle? (Let student respond)

SAY: Good! Raise your hand if you circled a different face. (Call on another student.)

ASK: (Name of student), what face did you circle? (Let student respond)

SAY: Good!

ASK: Class, is (student's name)’s answer wrong?

SAY: No, of course not—because what ever each of you think is right. There are no wrong answers. You can each have different answers.

Raise your hand if you circled a face that (first student’s name) and (second student’s name) did not.

ASK: (Student’s name), what face did you circle? (Let student respond.) Class, is (student’s name)’s answer right?

SAY: Yes, of course it’s right. If it’s what you really think, then it’s right.

READ: Now you will do some stories on your own. I will read the story to you, and then I will read the questions to you. You answer the questions by circling one of the faces. Do not call out your answers. We can talk about the stories when we have finished all of the questions, but not before.
Story # 1: GIRAFFE, THE TEACHER

SAY: Turn to the next page. Find the GIRAFFE at the top of the page. If you see the giraffe at the top of the page, you are on the right page.

READ: Story number one: “Giraffe, the Teacher.”

Giraffe is a teacher. All of the students in Giraffe’s class think she is a good teacher but they all have different reasons for why they think so.

A. Put your finger on the picture of the duck. Duck thinks that Giraffe is a good teacher because Giraffe helps the students learn how to read. Circle the face to show if this reason is BAD, OKAY, GOOD, or EXCELLENT.

B. Put your finger on the picture of the goat. Goat thinks that Giraffe is a good teacher because Giraffe gives all of the students stickers. Circle the face to show if this reason is BAD, OKAY, GOOD, or EXCELLENT.

C. Put your finger on the picture of the cat. Cat thinks Giraffe is a good teacher because Giraffe wants all of the students to do well. Circle the face to show if this reason is BAD, OKAY, GOOD, or EXCELLENT.

D. Put your finger on the picture of the hippo. Hippo thinks that Giraffe is a good teacher because Giraffe smiles a lot. Circle the face to show if you think this reason is BAD, OKAY, GOOD, or EXCELLENT.

E. Look at the last row with all of the animals in it. Circle the animal that you think had the best reason for thinking that Giraffe is a good teacher. Circle only ONE animal.

(REREAD all of the animals’ solutions in bold.)
Story # 2: COW AND THE CRAYON

SAY: Turn to the page with the cow at the top. If you do not see a cow at the top of the page you are on the wrong page. Find the page with the cow at the top.

READ: Story number two: "Cow and the Crayon."

Cow, Zebra, Porcupine, Lamb and Kangaroo are all in the same class at school. There is one box of crayons in the classroom. So when they draw they have to share crayons.

Cow is using a color crayon that everyone else wants to use.

A. Put your finger on the picture of the zebra. Zebra takes the crayon when Cow goes to get a drink of water. Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT way to get the crayon.

B. Put your finger on the picture of the porcupine. Porcupine says, "Cow, you have to give me the crayon so I can finish my picture." Circle the face to show whether this is a BAD, OKAY, GOOD, or EXCELLENT way to get the crayon.

C. Put your finger on the picture of the lamb. Lamb asks Cow, "Can I trade you for another color crayon so I can use the one you have?" Circle the face to show is this is a BAD, OKAY, GOOD, or EXCELLENT way to get the crayon.

D. Put your finger on the picture of the kangaroo. Kangaroo tells Cow, "I'll wait for the crayon, but hurry up, will you?" Circle the face to show if you think that this is a BAD, OKAY, GOOD, or EXCELLENT way to get the crayon.

E. Circle the picture of the animal who had the best way of getting the crayon. Circle only ONE animal. (REREAD all of the animals' solutions in bold.)
STORY #3: WHO CAN LION TRUST?

SAY: Turn the page. You should see a lion at the top of the page. If you do not see a lion, you are on the wrong page. Find the page with the lion at the top.

READ: Story number three: "Who Can Lion Trust?"

It was Lion's first day at a new school. Lion wants to know who he can trust to be his friend at the new school.

A. Put your finger on the picture of the elephant. Elephant says, “You can trust me, Lion, because I will always do what you tell me to do.” Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason to trust someone to be your friend.

B. Put your finger on the picture of the horse. Horse says, “You can trust me, Lion, because I will always sit next to you in school.” Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason to trust someone to be your friend.

C. Put your finger on the picture of the zebra. Zebra says, “You can trust me, Lion, because I will never tell your secrets.” Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT reason to trust someone to be your friend.

D. Put your finger on the picture of the tiger. Tiger says, “You can trust me, Lion, because I will give you presents.” Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT reason to trust someone to be your friend.

E. Look at the row of animals at the bottom of the page. Circle the animal you think gave the best reason for trusting someone. Circle only ONE animal. (Reread all the animals' solutions in bold.)
Story #4: ALLIGATOR CUTS IN LINE

SAY: Turn to the page with the Alligator at the top.

READ: Story number four: "Alligator Cuts in Line"

It was time for lunch and everyone was hungry. The teacher said, "Line up for lunch!" When Alligator got to the line, she cut in line in front of other students.

A. Put your finger on the picture of the rooster. When Alligator cut in front of rooster, **Rooster pushed Alligator back out of line.** Circle the face to show if you think what Rooster did when Alligator cut the line is BAD, OKAY, GOOD, or EXCELLENT.

B. Put your finger on the picture of the pig. When Alligator cut in front of Pig, **Pig told the teacher.** Circle the face to show if you think what Pig when Alligator cut the line is BAD, OKAY, GOOD, or EXCELLENT.

C. Put your finger on the picture of the camel. When Alligator cut in front of Camel, **Camel called Alligator a cheater.** Circle the face to show if what Camel did when Alligator cut the line is BAD, OKAY, GOOD, or EXCELLENT.

D. Put your finger on the picture of the moose. When Alligator cut in line in front of Moose, **Moose told Alligator that cutting in line is not fair.** Circle the face to show if you think what Moose did when Alligator cut the line is BAD, OKAY, GOOD, or EXCELLENT.

E. Look at the row with all the animals in it at the bottom of the page. Circle the animal that did the best thing when Alligator cut the line. Circle only ONE animal. (REREAD each animals’ reason in bold.)
STORY #5: FRIENDS WITH GOAT

SAY: Turn the page. You should see a goat at the top of the page. If you don't see a goat at the top of the page, you are on the wrong page. Find the page with the goat at the top.

READ: Story number five: "Friends with Goat."

Monkey, Dog, Panda; and Koala are all Goat's friends. One day, they all said why they were friends with Goat.

A. Put your finger on the picture of the monkey. **Monkey is friends with Goat because they like the same games.** Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason for being someone's friend.

B. Put your finger on the picture of the dog. **Dog is friends with Goat because they live on the same street.** Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason for being someone's friend.

C. Put your finger on the picture of the panda. **Panda is friends with Goat because Goat shares her toys with Panda.** Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason for being someone's friend.

D. Put your finger on the picture of the koala. **Koala is friends with Goat because they tell each other how they feel.** Circle the face to show if you think this is a BAD, OKAY, GOOD, or EXCELLENT reason for being someone's friend.

E. Look at the row with all of the animals in it at the bottom of the page. Circle the animal who had the best reason for being friends with Goat. Circle only ONE animal. (Reread all of the animals' solutions in bold.)
Story #6: WOLF'S LOST TEDDY BEAR

SAY: Turn to the page with the wolf at the top.

READ: Story number six: Wolf's Lost Teddy Bear

All of Wolf's friends had been thinking about what to get Wolf for her birthday. Then, the day before her birthday party, Wolf lost her very favorite teddy bear. When she found out it was lost, she cried and said to her friends “Nothing can ever replace my teddy bear!” After that, all of Wolf's friends talked about what to get Wolf for her birthday.

A. Polar Bear decided to get Wolf a puzzle because Wolf had said she didn’t want another teddy bear. Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT present to get Wolf.

B. Buffalo decided to get Wolf a new teddy bear because Wolf didn’t really mean it when she said nothing could replace it. Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT present to get Wolf.

C. Seal thought Wolf's parents would know what she really wants for her birthday, so Seal will ask them what to get her. Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT present to get Wolf.

D. Gorilla decided to get Wolf a hand puppet because Gorilla really likes puppets. Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT present to get Wolf.

E. Look at the last row with all the animals in it. Circle the animal that you think had the best idea for getting Wolf a birthday present. Circle only ONE animal. (REREAD all the animals solutions in bold.)
Story #7: RABBIT BREAKS A PLAYDATE

SAY: Turn to the page with a picture of Kitten and Rabbit at the top.

READ: Story number seven: Rabbit Breaks a Playdate.

Kitten and Rabbit scheduled a play date at Kitten's house. But Rabbit's mom says she must take Rabbit shopping for her school clothes on that same day. Rabbit calls Kitten to tell her she can't come over and gets the answering machine. Here are some things Rabbit might do.

A. Rabbit leaves the message, "My mother is taking me shopping—I'll call you when I get back." Circle the face to show if you think what Rabbit did is BAD, OKAY, GOOD, or EXCELLENT

B. Rabbit hangs up the phone because Kitten doesn't answer. Circle the face to show if you think Rabbit did is BAD, OKAY, GOOD, or EXCELLENT

C. Rabbit leaves the message, "I can't play today—I'm busy." Circle the face to show if you think what Rabbit did is BAD, OKAY, GOOD, or EXCELLENT

D. Rabbit leaves the message "I'm sorry we couldn't play today, but my mom had to take me shopping." Circle the face to show if you think what Rabbit did is BAD, OKAY, GOOD, or EXCELLENT

E. Now I am going to read all four of Rabbit's choices again very slowly, and you can circle the one you think is the very best. Circle only ONE.
Story #8: THE WET PUPPY

SAY: Turn to the page with the picture of the puppy at the top.

READ: Story number eight: The Wet Puppy.

Before he leaves the house to go to the store, Holly's father tells her to put their new puppy outside in the yard so it can get some exercise, and not to let it in until he gets back. After a while, it starts to rain, and the puppy scratches at the door to get in the house.

Holly is playing with some friends inside and is trying to decide if it is okay to let the puppy back into the house before her Dad comes back home. Listen to the advice each of Holly's friends gives her.

A. Turkey says "Let the dog in, Holly, because we can dry it off and play with it." Circle the face that shows whether you think this is BAD, OKAY, GOOD or EXCELLENT advice.

B. Walrus says "Let the puppy in because your Dad will understand that you knew he didn't mean that the puppy should be out in bad weather." Circle the face that shows whether you think this is BAD, OKAY, GOOD or EXCELLENT advice.

C. Leopard says "Let the puppy in because your Dad knows how much you like the puppy, and you don't want it to get wet." Circle the face that shows whether you think this is BAD, OKAY, GOOD or EXCELLENT advice.

D. Llama says "Let the puppy in because it's getting wet and it wants to come in." Circle the face that shows whether you think this is BAD, OKAY, GOOD or EXCELLENT advice.

E. Look at the bottom of your paper where all the animals are lined up in a row. Now, I will reread what each animal said, and I want you to circle the picture of the animal that you think made the best decision about the puppy. Circle only ONE picture.
Story #9: CROW AND CAT

SAY: Turn to the next page. Find the Crow at the top of the page. If you see the crow at the top of the page, you are on the right page.

READ: Story number nine: “Crow and Cat.”

Crow and Cat were playing together at Crow’s house one rainy day. Crow wanted to play outside and splash in the puddles, but Cat wanted to stay in where it was dry and watch a movie. They couldn’t decide what to do for a long time. Crow thought of four ways to figure out what to do. Decide if Crow’s ideas are BAD, OKAY, GOOD or EXCELLENT.

A. Crow could tell Cat, “If you play outside with me I’ll let you use my Game Boy later.” Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT way to decide what to do.

B. Crow could go outside to splash in the puddles, and hope that Cat would decide to join him. Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT way to decide what to do.

C. Crow could say to Cat “Since we can’t agree about what to do, let’s flip a coin.” Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT way to decide what to do.

D. Crow could tell Cat “It’s my house so we have to play outside.” Circle the face to show if this is a BAD, OKAY, GOOD, or EXCELLENT way to decide what to do.

E. Look at the last row with all the crows lined up. Circle the picture of the Crow who is doing what you would have done if you and a friend could not agree on what to play.
Appendix G

4+ Relationship Questionnaire
GSID Relationship Questionnaire

Grades 4+

* Version 4.0 *

This questionnaire is not a test and there are no right or wrong answers to any of the questions. Each student will have different opinions, thoughts, and feelings about different issues or situations. We are interested in your experiences and what you think about certain things. We hope you will find these questions interesting.

STUDENT INSTRUCTIONS:

1. For each incomplete sentence, indicate with a check mark whether you think that each sentence completion choice is POOR, OK, GOOD, or EXCELLENT.

2. Next, write the letter (a, b, c, or d) of the choice that you think is the best in the box provided.

EXAMPLE

It is good to work hard in school because

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a. you might win an award
b. you don’t have a choice about being there, so you might as well
c. you will feel good about yourself
d. it will make your parents happy

Write the letter (a, b, c, or d) of the choice that you think is the best in this box:

I AM A GIRL □

I AM A BOY □
1. Someone is a good friend because he or she:

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<tr>
<td>a. does what you ask</td>
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<td>□</td>
<td>□</td>
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<tr>
<td>b. lives close by</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>c. shares his or her feelings with you</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>d. will keep your secrets</td>
<td>□</td>
<td>□</td>
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Write the letter (a, b, c, or d) of the choice that you think is the best in this box: [ ]

2. A good teacher:

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<th>Excellent</th>
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<tr>
<td>a. does not yell</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>b. keeps the class quiet</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>c. lets the students help make some decisions</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>d. listens to students' ideas</td>
<td>□</td>
<td>□</td>
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</table>

Write the letter (a, b, c, or d) of the choice that you think is the best in this box: [ ]

3. When you trust someone it is because they:

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<th>Poor</th>
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<th>Excellent</th>
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<tbody>
<tr>
<td>a. give you presents</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. mean what they say</td>
<td>□</td>
<td>□</td>
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<tr>
<td>c. are loyal to you</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>d. keep your secrets</td>
<td>□</td>
<td>□</td>
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Write the letter (a, b, c, or d) of the choice that you think is the best in this box: [ ]

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Group for the Study of Interpersonal Development (GSID)
Sept. 1998
4. The best reason to explain why kids your age get into fights is:

- a. they get mad at people who talk behind their back (Poor OK Good Excellent)
- b. they were hit by another kid (Poor OK Good Excellent)
- c. they can’t see any other way to deal with some people (Poor OK Good Excellent)
- d. they like fighting to show who’s boss (Poor OK Good Excellent)

Write the letter (a, b, c, or d) of the choice that you think is the best in this box:

5. The best reason to explain why some kids your age don’t get into fights is:

- a. they don’t like fighting (Poor OK Good Excellent)
- b. they know how to see each person’s point of view in an argument (Poor OK Good Excellent)
- c. they are not good fighters (Poor OK Good Excellent)
- d. they have learned other ways to deal with problems (Poor OK Good Excellent)

Write the letter (a, b, c, or d) of the choice that you think is the best in this box:

6. The best reason to explain why someone your age joins gangs is:

- a. to show off in front of other girls or boys (Poor OK Good Excellent)
- b. because they want to be cool (Poor OK Good Excellent)
- c. they just like being in a gang (Poor OK Good Excellent)
- d. being in a gang gives them a feeling of belonging to a family (Poor OK Good Excellent)

Write the letter (a, b, c, or d) of the choice that you think is the best in this box:
7. Jody doesn't like the idea of shoplifting or stealing things from stores. One day Jody's best friend Naomi says she is going to steal something from a store and asks Jody to go with her. Jody says she doesn't want to, and Naomi calls her a wimp. Jody could

- a. tell Naomi not to steal. [ ] [ ] [ ] [ ]
- b. explain to Naomi why she thinks stealing is wrong and talk her into not stealing. [ ] [ ] [ ] [ ]
- c. persuade Naomi that stealing is not worth the risk of getting caught. [ ] [ ] [ ] [ ]
- d. just walk away. [ ] [ ] [ ] [ ]

Write the letter (a, b, c, or d) of the choice that you think is the best in this box: [ ]

8. Steve and Carlos are friends. One day at school, they try to decide what they want to do that night. Steve wants to invite a new kid in school to go the movies with him and Carlos. Carlos wants to go to the movies alone with Steve. Carlos could

- a. tell Steve that he can't go because he's sick. [ ] [ ] [ ] [ ]
- b. tell Steve he won't go. [ ] [ ] [ ] [ ]
- c. explain to Steve why he wants the two of them to go alone, ask Steve to explain his position, and then figure out what to do. [ ] [ ] [ ] [ ]
- d. tell Steve he'll go to the movies with Steve and the new kid if he and Steve can do something alone together later. [ ] [ ] [ ] [ ]

Write the letter (a, b, c, or d) of the choice that you think is the best in this box: [ ]
9. The principal of the school has told the student council that this year there are no funds for after-school activities such as sports and art. Because a lot of students in the school are upset about losing these activities, Leticia and the other members of the student council need to decide what to do. Leticia and the other student council members could

- **Poor** 
  - a. beam an awareness campaign to get parents to understand how important sports and art are for the students
  - b. offer to paint the school building in return for money for after-school programs
  - c. don't do their school work
  - d. go to the next school board meeting and tell people to get the money for sports and art

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:

10. Gladys, who has a ten o'clock curfew, goes to a party one Saturday night. She gets home at 12:00 and her father is waiting up for her. He is very angry and grounds her for a month. Gladys feels that the punishment is too severe and thinks she is old enough to stay out past 10:00. Gladys could

- **Poor** 
  - a. storm out of the room
  - b. tell her father he can't tell her what to do
  - c. ask her father to work with her on an agreement which would allow her to stay out later on weekends
  - d. explain to her father why she feels she's old enough to stay out late.

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:
11. Amy is very athletic and likes sports. She particularly likes baseball and decides to try out for the neighborhood Little League team one spring, even though there are no other girls on the team. During the tryouts, some of the boys start 'dissing' her, saying that baseball is for boys and that they don't want her on the team. Amy tries out anyway, but the next day when the coach announces who made the team, Amy is not chosen. Amy could

- tell the coach, “I know I played better than some of the boys who made the team and you know I deserve to be on it.”
- say to the coach what she thinks about not making the team.
- slam her locker door and tell her friends what she thinks of the coach.
- go to the coach to hear his reasons for not putting her on the team and explain her point of view to him.

Write the letter (a, b, c, or d) of the choice that you think is the best in this box.
12. Holly is baby-sitting for her little brother, Max, so her parents can enjoy a Saturday out. Before they leave for the evening, they tell Holly to be sure not to let Max watch any TV after 9:00. Holly sends Max to bed at 9:00 and stays up to watch a movie she's been wanting to see. At 9:30, Max comes downstairs, awakened by a bad dream, and asks to stay up and watch TV with Holly because he can't sleep. Holly should say to Max

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<tr>
<th>Choice</th>
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<tbody>
<tr>
<td>a. &quot;I'll let you stay up. I know you're scared.&quot;</td>
<td>Poor</td>
</tr>
<tr>
<td>b. &quot;You can stay up. Just be quiet so I can watch the movie.&quot;</td>
<td></td>
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<tr>
<td>c. &quot;You can stay up--Mom and Dad will understand that I let you stay up because you had a bad dream.&quot;</td>
<td></td>
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<tr>
<td>d. &quot;You can stay up--Mom and Dad wouldn't want you to be alone when you're afraid.&quot;</td>
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Write the letter (a, b, c, or d) of the choice that you think is the best in this box:  

13. Tanya and Stanley have a date to go rollerskating. An hour before she is supposed to leave home to meet Stanley, Tanya gets a call from a friend who has an extra ticket to a football game and would like Tanya to come with her. The game starts at the same time that Tanya is to meet Stanley. Tanya calls Stanley to change their plans, but gets Stanley's answering machine. Tanya should

<table>
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<tr>
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<tbody>
<tr>
<td>a. leave the message &quot;A friend called and offered me a ticket to today's football game, so I'm going. I'll call you when I get back.&quot;</td>
<td></td>
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<tr>
<td>b. leave the message &quot;I know you'll be disappointed, but I have to change our plans. I was looking forward to seeing you, and I'm sorry about this. I'll call you when I get back.&quot;</td>
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<tr>
<td>c. leave the message &quot;I have to change our plans to go skating. I'll call you later.&quot;</td>
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<tr>
<td>d. call back after the game.</td>
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Write the letter (a, b, c, or d) of the choice that you think is the best in this box: 

14. Dan's grandfather doesn't speak English and needs to find a job. Dan, who does speak English, goes out with his grandfather to help him find work. Dan sees a restaurant with a Help Wanted sign in the window and goes inside to speak with the owner. Because his family needs money so badly, Dan lies to the man, telling him that his grandfather knows how to cook. Dan also lies to his grandfather, telling him the owner has hired him even though he knows he isn't a cook. Dan lies to his grandfather because he

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<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>is thinking only about himself and not about how his grandfather might feel.</td>
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</table>

b. is thinking about earning money to feed his family, and so he didn't think about how his grandfather might feel. |    |    |    |    |

c. thought that once he had time to explain the situation to his grandfather, he'd understand and forgive him. |    |    |    |    |

d. thought his grandfather would be upset if he knew Dan had lied to the man hiring cooks |    |    |    |    |

Write the letter (a, b, c, or d) of the choice that you think is the best in this box:
15. My closest friends are important to me because:

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<tbody>
<tr>
<td>a. they make me feel better about myself</td>
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<td></td>
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<tr>
<td>b. they like me</td>
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<tr>
<td>c. they help me stay out of trouble</td>
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<td></td>
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<tr>
<td>d. we can talk to each other about anything</td>
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</tr>
</tbody>
</table>

\[\text{Write the letter (a, b, c, or d) of the choice that you think is the best in this box: } \square\]

16. My parents are important to me because:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. they make me feel better about myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. they just are important</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. they help me stay out of trouble</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. they provide the support that I need</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[\text{Write the letter (a, b, c, or d) of the choice that you think is the best in this box: } \square\]

17. When I get in fights or arguments with other people, it is because:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. they get in my way</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. they talk about me behind my back</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. if I don't fight they'll think I'm afraid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. I keep my self-respect by not backing down</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[\text{Write the letter (a, b, c, or d) of the choice that you think is the best in this box: } \square\]
18. When I don't get in fights or arguments with other people, it is because:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. it's not part of who I am</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>b. not fighting is the only solution to all problems</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>c. nobody likes their friends to fight</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>d. I'm in a good mood</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

Write the letter (a, b, c, or d) of the choice that you think is the best in this box: ☑

19. If someone calls my mother a name or insults me in school I would FIGHT THEM because:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. if I let them get away with it once they'll do it again</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>b. it gets me mad</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>c. even though I know that fighting is not always in my best interest, sometimes there's no other way to deal with disrespect</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>d. you don't let anybody mess with you or your family</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

Write the letter (a, b, c, or d) of the choice that you think is the best in this box: ☑
20. If someone calls my mother a name or insults me in school I would NOT FIGHT THEM because:

<table>
<thead>
<tr>
<th>a. I could get hurt</th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. I don't want to get into trouble</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I only fight when someone hits me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. fighting's not going to make me feel better or solve anything</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:  

21. My best friend and I do things separately sometimes because:

<table>
<thead>
<tr>
<th>a. we ignore each other when we've had a fight</th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. we can't agree about what to do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. we like to do different things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. our friendship is secure without always being together</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:  

Group for the Study of Interpersonal Development (GSID)
Sept. 1998
22. When my best friend and I don’t agree on what to do, I might:

<table>
<thead>
<tr>
<th>Choice</th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. try to convince my friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. listen to my friend and work it out</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. get upset and go away to be by myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. go along with my friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:

23. When I don’t agree with the adult I am closest to, I might:

<table>
<thead>
<tr>
<th>Choice</th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. try to convince them</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. just forget it</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. listen to them and work it out</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. get so upset I run into my room</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box:
24. I sometimes don't agree with what my teachers tell me at school because:

<table>
<thead>
<tr>
<th>Choice</th>
<th>Poor</th>
<th>OK</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. they blame me for things I don't do, and that makes me mad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. I need to stick up for what I think and believe is right</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I don't think they understand my point of view</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. I don't listen to them</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

√ Write the letter (a, b, c, or d) of the choice that you think is the best in this box: 

25. During the past SIX MONTHS, how many times, if any, were you in a physical fight?

<table>
<thead>
<tr>
<th>Choice</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 0 times</td>
<td>☐</td>
</tr>
<tr>
<td>b. 1 time</td>
<td>☐</td>
</tr>
<tr>
<td>c. 2 or 3 times</td>
<td>☐</td>
</tr>
<tr>
<td>d. 4 or 5 times</td>
<td>☐</td>
</tr>
<tr>
<td>e. 6 or 7 times</td>
<td>☐</td>
</tr>
<tr>
<td>f. 8 or 9 times</td>
<td>☐</td>
</tr>
<tr>
<td>g. 10 or 11 times</td>
<td>☐</td>
</tr>
<tr>
<td>h. 12 or more times</td>
<td>☐</td>
</tr>
</tbody>
</table>

Group for the Study of Interpersonal Development (GSID)
Sept. 1998
Appendix H

Mental Illness Vignettes
DIRECTIONS TO THE STUDENTS

Sometimes kids have different ideas about why someone acts the way they do. I am interested in understanding children's opinions about other people's behavior. To help me understand what you think, I am going to read some stories to you about kids acting in different ways. I am then going to ask you some questions about the kids in each of the stories. Before I ask you the questions, I will make sure you understand the stories by asking you to tell me what happened.

Tommy/Tammy
(Normal Child)

Tommy/Tammy is in the [insert appropriate grade]. This year, he/she does not have any friends in his/her classes. All the kids know that he/she wants to be in other classes where his/her two best friends are. When the teacher asks the class questions, Tommy/Tammy never tries to answer and does not feel like doing any class projects with other students this year. At lunch, he/she always goes to hang out with his/her two best friends. One day in gym, the class began playing basketball and Tommy/Tammy was one of the very best players. Soon, all the kids want to play basketball with Tommy/Tammy. The kids started to notice that Tommy/Tammy was not talking about wanting to be in other classes anymore. And at lunch, he/she always wants to hang out with people from his/her gym class who want to play basketball. One day, a teacher hears Tommy/Tammy talking to his/her two best friends after school. He/She said, “We are the best basketball team.” The next day, Tommy/Tammy had a great idea for a class science project.
Will/Wendy
(Depressed Mood)

Will/Wendy is in the ______ grade and he/she is always in such a grumpy mood. Sometimes, Will/Wendy is so grumpy that he/she will start yelling and crying when something simple goes wrong. After school, he/she walks home with a few people, but he/she almost never plays ball, goes bike riding, hangs out, or does things like that with other kids. Will/Wendy says he/she is too tired and just has no interest in playing or doing the things he/she used to think were fun. Sometimes, Will/Wendy stays home from school because he/she is so grumpy and very unhappy. At these times, Will/Wendy’s friends have seen him/her having temper tantrums and sometimes crying for no reason. When Will/Wendy does come to class, the teacher gets upset at Will/Wendy a lot because he/she never does his/her homework. He/she never does the work in class either and never seems to pay attention. Like when the class finishes working on an assignment, Will/Wendy is always just sitting at his/her desk looking around or staring at the desk. He/She had not even started to work yet.
Harry/Helen is a ________ grader. On the first day of school, the teacher wanted Harry/Helen to stay after class to get extra help, but Harry/Helen said he/she must get home to make sure his/her mom and dad were okay. Harry/Helen was worried that something bad had happened to them while he/she was at school. The next morning, when some friends stopped to pick up Harry/Helen on the way to school, Harry/Helen’s mother said he/she was feeling a little sick with a stomachache and headache and would stay home for a couple of days. When Harry/Helen finally did go to school, he/she told his/her friends that he/she was very worried about being away from home. When the friends asked why, Harry/Helen said that he/she did not want to be without his/her parents, in case something bad happening to them, or to him/herself, like being kidnapped. Harry/Helen’s friends told him/her not to be silly. But, when Harry/Helen went to the first class, he/she sat down at his/her desk and looked like he/she was going to cry.
John/Jennifer
(Conduct Disorder)

John/Jennifer is in the ________ grade. He/She gets in a lot of trouble at school for doing things like lying to teachers and stealing things that belong to other kids. One day, John/Jennifer ripped some special school papers off a bulletin board and threw them in the garbage. Another time, John/Jennifer got into serious trouble for starting a fire in the bathroom garbage can. John/Jennifer doesn’t usually keep friends for very long because he/she is mean to them and gets into fights with them. Sometimes, John/Jennifer even hits other kids. When the teachers get involved and tell him/her to stop, he/she says, “I don’t want to and you can’t make me.” One time he/she even tried to kick and punch a teacher. A couple of times, teachers have kicked John/Jennifer out of class. He/she usually makes a lot of noise, yells nasty things, and kicks the classroom door. The last time John/Jennifer did that, he/she was sent down to the principal’s office.
Eric/Emily
(Psychosis)

Eric/Emily is a (n) _______ grader. One day in school, it was his/her turn to give a class report and he/she talked about the planet Venus. But right in the middle of his/her report, he/she jumped up, ran to the window, and started jumping and yelling, “Here they come! Don’t you hear them? The Venus space ships are coming to school.” The teacher went over to Eric/Emily and tried to calm him/her down, but Eric/Emily was so upset the teacher sent him/her home for the day. Sometimes, Eric/Emily talks in strange ways that don’t make any sense at all. Other times, he/she cries or laughs out loud in class for no reason. One time, when a student asked why he/she was crying, Eric/Emily said that space creatures were telling him/her they were coming from space. He/She doesn’t understand why nobody else hears the space creatures talking. When other students say something about the planets, Eric/Emily says they are all wrong. He/she says the space aliens have talked to him/her and described how it really is.
Appendix I

Clinician Rating Scale
Thank you for agreeing to review the following mental illness vignettes. Your assistance will help determine whether the presentations of these vignettes are on the right track. For each vignette, please complete the rating scale below, which asks how “correct” each appears on the surface in its presentation of the mental illness depicted by the central figure.

On a scale from 1 (not at all) to 5 (very much) – how accurate is the following vignette as a presentation of a(n)......

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not at All</td>
<td>Little</td>
<td>Some</td>
<td>Lots</td>
<td>Very Much</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vignette</th>
<th>Rating</th>
<th>Comments?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Normal child</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. Depressed child</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. Anxious child</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. Conduct disordered child</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. Psychotic (schizophrenic) child</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
Appendix J

Children's Perception of Psychopathology Inventory
**INSTRUCTIONS TO ADMINISTRATOR**

*Please read each of the following questions to the participant. Present the five-point scale card (for Grade 1's) or the student scale copy (for Grades 4 and 7) after the presentation of each vignette to facilitate participant responding.*

**VIGNETTE NUMBER:____________**

<table>
<thead>
<tr>
<th>VI. Liking and Friendship</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much would you like to have this child as a friend?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. How much fun would it be to play (hang out) with this child?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. How popular do you think this child is with other children?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. How much would this child be liked by his/her teachers?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. How much would this child be liked by his/her parents?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VII. Adaptive Functioning</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. How well does this child do in his/her schoolwork?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. How often does this child do what his/her parents ask?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. How good does this child usually feel about himself/herself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. How well does this child get along with his/her family?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Do you think this child needs help for his/her problem?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### III. Positive Prognosis

<table>
<thead>
<tr>
<th></th>
<th>1 Not at All</th>
<th>2 Little</th>
<th>3 Some</th>
<th>4 Lots</th>
<th>5 Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. How many problems do you think his child will have when he/she grows up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. How many friends will this child have when he/she grows up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. How likely is it that this child will have a good job when he/she grows up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. How happy will this child be when he/she grows up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### IV. Causal Influences – Why do you think this child acts this way? Was it because:

<table>
<thead>
<tr>
<th></th>
<th>1 Not at All</th>
<th>2 Little</th>
<th>3 Some</th>
<th>4 Lots</th>
<th>5 Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Something happened when he/she was born?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. His/her parents were divorced?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. He/she was bad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. He/she has an illness?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. Other children were mean to him/her?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Parents beat him/her?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. The doctor did something wrong to him/her when he/she was born?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22. He/she has had an accident?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23. His/her parents yelled and argued often?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### IV. Causal Influences — Why do you think this child acts this way? Was it because:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. A therapist (like a psychiatrist or psychologist) did something wrong to him/her?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25. A teacher did something wrong to him/her?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26. Parents were mean to him/her?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27. Something he/she ate?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28. He/she didn’t do what parents told him/her to do?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29. He/she didn’t do what teachers said to do?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix K

Emotional Understanding Interview
INSTRUCTIONS TO ADMINISTRATOR

Please ask each participant the following questions after the presentation of each photograph. Write the child’s responses below each question.

EMOTION PICTURE NUMBER: ____________

<table>
<thead>
<tr>
<th>I. Identification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do you think this kid is feeling?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Emotional Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Do you ever feel like this?</td>
</tr>
<tr>
<td>3. Do you ever feel this way when you are with any of the kids at school?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Causes of Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. What kinds of things make you feel this way?</td>
</tr>
<tr>
<td>5. Can you give me an example of a time you felt this way? (Then what happened?)</td>
</tr>
<tr>
<td>6. Let’s pretend you saw another kid looking this way. Why do you think he/she might be looking like that?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Emotional Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. When you feel this way, do you show it and let other people see how you feel?</td>
</tr>
<tr>
<td>8. If you felt this way, would you let your mom see you looking like this?</td>
</tr>
<tr>
<td>9. If you felt this way, would you let your dad see you looking like this?</td>
</tr>
</tbody>
</table>
V. Action Response

10. If your mom saw you looking this way, what would she do?

11. If your dad saw you looking this way, what would he do?

12. If you saw another kid looking this way, what would YOU do?