

**The Child Unusual Beliefs Scale:  
A Preliminary Validation Study**

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**Submitted in Partial Fulfillment of the Requirements for the  
Degree of Doctor of Psychology in the Department of Psychology at Pace University  
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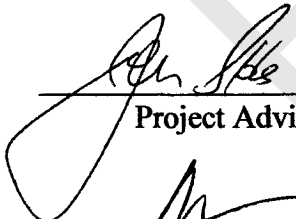
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## TABLE OF CONTENTS

	Page
<b>ACKNOWLEDGEMENTS</b>	vi
<b>ABSTRACT</b>	vii
<b>LIST OF TABLES</b>	ix
<b>CHAPTER I</b>	
INTRODUCTION	1
<b>CHAPTER II</b>	
LITERATURE REVIEW	3
<i>Overview of Psychosis in Children</i>	3
<i>Diagnosis of Psychosis in Children</i>	9
<i>Risk Factors Associated with Psychosis in Children</i>	12
<i>High-Risk Research</i>	12
<i>Meehl's Theory of Schizotypy</i>	16
<i>Risk Factors Associated with Psychosis in Children</i>	20
<i>Understanding Thought Disturbance in Children</i>	24
<i>Developmental Considerations of Thought Disturbance in Children</i>	25
<i>Diagnostic Considerations Regarding Thought Disturbance in Children</i>	28
<i>Assessment of Disordered Thought and Psychotic Symptoms in Children</i>	30
<i>Performance-Based Measures</i>	31
<i>Interview/Observational Rating Scales</i>	38
<i>Self-Report Rating Scales</i>	38
<i>The CUBSCALE</i>	40

## TABLE OF CONTENTS

	Page
STATEMENT OF PURPOSE	42
HYPOTHESES/RESEARCH QUESTIONS	42
<b>CHAPTER III</b>	
METHOD	44
<i>Participants</i>	44
<i>Materials</i>	44
<i>The CUBSCALE</i>	46
<i>The ChIPS</i>	46
<i>The Rorschach</i>	47
<i>The CPSRS</i>	48
<i>Chart Review</i>	48
<i>Procedure</i>	48
<i>Data Analysis</i>	48
<b>CHAPTER IV</b>	
RESULTS	50
<i>Reliability</i>	
<i>Test-Retest Reliability</i>	50
<i>Internal Consistency</i>	52
<i>Test Characteristics</i>	
<i>Exploratory Factor Analysis</i>	53
<i>Age and Gender Analysis</i>	53

## TABLE OF CONTENTS

	Page
<i>Criterion Validity</i>	
<i>Hypothesis 1</i>	59
<i>Hypothesis 2</i>	60
<i>Hypothesis 3</i>	61
<i>Hypothesis 4</i>	62
<i>Relationship Between the CUBSCALE and a Diagnosis of Psychosis</i>	63
<b>CHAPTER V</b>	
<b>DISCUSSION</b>	67
<i>Reliability</i>	68
<i>Test Characteristics</i>	69
<i>Criterion Validity</i>	
<i>Hypothesis 1</i>	70
<i>Hypothesis 2</i>	71
<i>Hypothesis 3</i>	74
<i>Hypothesis 4</i>	74
<i>Relationship Between the CUBSCALE and a Diagnosis of Psychosis</i>	75
<i>Conclusions</i>	76
<i>Limitations of the Current Study</i>	77
<i>Implications for Future Research</i>	78
<i>Implications for School/Clinical-Child Psychology</i>	79
<b>REFERENCES</b>	81

## TABLE OF CONTENTS

	Page
<b>APPENDIX</b>	
A. Research Proposal Approval Form from Four Winds Hospital	92

PREVIEW

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## ABSTRACT

This study examined 151 child cases from an inpatient psychiatric setting to assess the clinical utility of the Child Unusual Beliefs Scale (CUBSCALE; Viglione, Fauroat, Khorram, and Muir, 1994). The CUBSCALE is a measure that was designed to assess unusual thinking, proneness to psychosis, and vulnerability to schizophrenia in children (Viglione et al, 1994).

The purpose of the present study was to build on the work done by Viglione et al. (1994) by examining the convergent validity of the CUBSCALE in a sample of psychiatric inpatient children. In order to establish convergent validity, the CUBSCALE was compared to several criterion measures that have been selected based on their ability to discriminate psychotic symptomology. The participants of this study were selected from a sample of referrals to the psychological assessment service of a child psychiatric inpatient hospital. A total of 151 children were selected from this group on the basis of having completed a valid CUBSCALE.

For this study we examined test-retest reliability and the construct and criterion validity of the CUBSCALE. The results demonstrated adequate test-retest reliability and good internal consistency (Coefficient Alpha = .86). An examination of test characteristics did not reveal the presence of significant age or gender differences in item endorsement. The results indicated that the CUBSCALE was significantly related to the diagnosis of a psychotic disorder, based on diagnostic interview and chart diagnosis. The CUBSCALE was also found to be significantly related to the presence of some aspects of thought disturbance, as measured by the Rorschach test, diagnostic interview, and therapist ratings. Furthermore, a significant relationship was found between the

CUBSCALE and the presence of overt psychotic symptoms (i.e., hallucinations) as rated by the therapist and documented in the participant's medical record. Thus, the results of this study support that the CUBSCALE appears to be a reliable measure that is selectively related to the psychiatric characteristics that it should be. This suggests good convergent validity for the CUBSCALE as a measure of thought disturbance and psychotic symptomology in a psychiatric population. However, the full diagnostic utility of this measure continues to be unclear and future research in this area would be beneficial. Limitations and additional directions for future research were discussed, as well as the relevance of this research to the field of school/clinical-child psychology.

## LIST OF TABLES

Table	Page
1. Demographics of Population	45
2. CUBSCALE Item Test-Retest Reliabilities	50
3. Chi Square Analysis of Item Endorsement Frequency for the Young and Older CUBSCALE Groups	54
4. Chi Square Analysis of Item Endorsement Frequency for the Male and Female CUBSCALE Groups	57
5. Correlations Between CUBSCALE Total Score and the ChIPS	60
6. Correlations Between CUBSCALE Total Score and Rorschach Variables	61
7. Correlations Between CUBSCALE Total Score and CPSRS Variables	62
8. Correlations Between CUBSCALE Total Score and Chart Review Variables	63
9. Chi Square Analysis of Item Endorsement Frequency for the Psychotic and Non-Psychotic CUBSCALE Groups	64

# CHAPTER I

## INTRODUCTION

Conceptualizing thinking problems in children overlaps theoretically with many diagnostic issues in child psychopathology. It has been studied in adult-onset and childhood schizophrenia, and in the context of vulnerability to psychosis, as well as in disorders of a non-psychotic nature (Lohr & Birmaher, 1995; Caplan, 1994b). As our knowledge about thinking problems has grown over the years, for instance in adult-onset schizophrenia, many researchers have directed their attention to the manifestation of thinking problems among children and adolescents, particularly in the context of psychotic disorders. One avenue that researchers have taken (i.e., Chapman and Chapman, 1980) is the development of measures to identify those who are vulnerable to developing psychotic disorders based largely on Meehl's (1962, 1990) formulation of the schizotypal personality organization. This approach is beneficial in that early identification and intervention may improve prognosis and expand our knowledge of the development, course, and onset of psychotic disorders.

The ability to differentially assess psychotic symptoms and thinking problems in childhood would aid in the early identification of psychotic disorders in childhood and inform intervention efforts to improve prognosis. Viglione, Fauroat, Khorram, and Muir (1994) sought to develop a measure designed to assess unusual thinking, proneness to psychosis, and vulnerability to schizophrenia in children, called the Child Unusual Beliefs Scale (CUBSCALE; Viglione et al., 1994). Additional validation studies are necessary to demonstrate the clinical usefulness of this new instrument in assessing the degree of psychosis and the identification of at-risk children.

The present study aims to build on the work done by Viglione et al. (1994) by examining the convergent validity of the CUBSCALE in a sample of psychiatric inpatient children. In order to establish convergent validity, the CUBSCALE was compared to several criterion measures that have been selected based on their ability to discriminate psychotic symptomology. The participants of this study were selected from a sample of referrals to the psychological assessment service of a child psychiatric inpatient hospital. For this study we examined test-retest reliability and the construct and criterion validity of the CUBSCALE with the goal to provide information regarding the use of the CUBSCALE as a clinical tool for the assessment of unusual thinking as well as psychotic and pre-psychotic states in children.

## CHAPTER II

### LITERATURE REVIEW

The literature in the area of childhood thinking problems is marked by confusion due to the presence of overlapping variables that often seem to be referred to as virtually synonymous. Terms such as, but not limited to, thought disturbance, thought disorder, and psychotic or schizophrenic thinking are often used interchangeably in the literature, creating confusion as to the nature of the psychological dysfunction under investigation. Because of the conceptual confusion occurring earlier in history, it is difficult to present an adequate scope of the current understanding without approaching this topic from the perspective of general issues of psychosis to more specific issues of thinking problems. Therefore, the following chapter will present an overview of some of the overlapping categories, such as psychosis, schizophrenia, and schizophrenia-spectrum disorders, in order to illustrate the evolution of the study of thinking problems in the context of these conditions. This chapter will then provide an overview of thinking problems and discuss the implications from research in the areas of childhood thought disorder, psychosis, and schizophrenia with regard to the assessment of thinking disturbances in children.

#### *Overview of Psychosis in Children*

Psychotic disorders in childhood are considered to be a rare phenomenon. Available epidemiologic data are not reliable because of differences in definition, however, it has been reported that about four percent of schizophrenic psychoses begin before age 15, 0.5 to 1 percent before age 10, and about one in 10,000 children will develop a schizophrenic disorder (Remschmidt, et al., 1994). Descriptions of so-called “insanity” occurring in childhood have been recorded dating back to the late 18<sup>th</sup> century

(Maudsley, 1868). Although instances such as these were recorded, the recognition and systematic study of psychotic disorders in childhood was delayed.

Griesinger (1867), between 1845 and 1860, provided a description of psychoses in intellectually normal children, as well as in the intellectually limited children that he observed in several different institutions. He believed that both manic and depressed forms of insanity were found in children, similar to these forms that are found in adults. Within the category of the maniacal conditions, he included the acting out aggressive child, the schizophrenic child and the hyperactive child (Macmillan, 1960). Griesinger believed the depressed, or melancholic, forms to be less common than the maniacal types in children, and within this condition he included generalized anxiety and hypochondria.

After Griesinger, the next influential writer on childhood psychosis was Maudsley. Maudsley (1868) examined the association between the type of psychosis and the level of development reached by the child. Thus, he considered the “sensory motor insanities,” including, epilepsy, choreic movements associated with hallucinations, and delusions. He also suggested an elaborate seven-point classification system, which is as follows: monomania, choreic mania, cataleptoid insanity, epileptoid insanity, mania, melancholia, and affective insanity. He included this classification system in a chapter entitled “Insanity of Early Life” in his 1880 book, *Physiology and Pathology of Mind*. However, after Maudsley’s discussion of these disorders, the psychotic child was hardly an object of study.

Hermann Emminghaus, in the first textbook on child psychiatry, *Psychic Disturbances of Childhood* (published in 1887), described childhood psychosis as “cerebral neurasthenia” and defined this disorder as “neurosis of the brain characterized

by a reduction of cognitive abilities, mood changes, sleep disturbances and manifold anomalies of innervation with a subacute or chronic course and different states of outcome” (cited in Remschmidt et al., 1994, p.727). He also believed that neuropathic children are predisposed to psychotic states and that the development of the disorder can be attributed to disturbances of the blood vessels of the cerebral cortex.

At the beginning of the 20<sup>th</sup> century, Kraepelin distinguished two kinds of endogenous psychoses: dementia praecox and manic-depressive psychoses (Remschmidt et al., 1994). Based upon conditions that had previously been identified, Kraepelin pulled together catatonic, hebephrenic, simple deteriorating, and certain paranoid states under the unifying name dementia praecox. He applied the term “dementia praecox” to characterize diseases that share features such as hallucinations, delusions, distorted emotional expression, attentional difficulties, and thinking and judgment disturbances (Lewis, 1936). Once this was generally accepted, professionals began to examine if this new concept could be applied to children. Kraepelin recognized that psychosis could begin in children and he also defined the primary symptomology (delusions, hallucinations, etc.), although he thought it primarily a “disorder of the will” (Werry, 1996, p.2).

In 1906, DeSanctis in Italy concluded, based on his studies of mental deficiency and dementia praecox, that “while primarily feeble-minded children can display psychotic behavior, others, though neurologically intact and intellectually well endowed, deserve the term dementia praecocissima because of the very early age at which dementia praecox becomes manifest” (Kanner, 1971, p.16). Austrian educator Heller, in 1908, described six cases of an infantile disorder that took an unusual course: “onset in the third



or fourth year of life after normal development; increasing malaise; rapid diminution of interests with loss of speech and sphincter control; final complete idiotic regression, with retention of an intelligent physiognomy and of adequate motor functioning” (p.16). Heller’s disease was regarded as the earliest form of dementia praecox.

In 1911, Eugen Bleuler (1950) introduced the term *schizophrenia* and the concept of reaction, in which symptoms were viewed as shaped by a person’s dynamics rather than completely by the disease. In addition, Bleuler referred to the “schizophrenias” believing that it was not one but several disorders. He applied this term to characterize “a group of psychoses whose course is at times chronic, at times marked by intermittent attacks, and which can stop or retrograde at any stage, but does not permit a full *restitution ad integrum* [restoration to the whole]” (p. 9). Bleuler (1950) described these conditions as being characterized by a unique alteration in the way one thinks, feels, and relates to the external world. He also described phenomena such as hallucinations, delusions, confusions, affective fluctuations, and catatonic symptoms.

However, Bleuler himself, had next to nothing to say about schizophrenia in children. He did state that most cases of schizophrenia manifest after puberty, but that in at least five percent of adult cases with reliable case histories, the illness can be traced back to childhood. He indicated that observations of patients during childhood reveal the presentation of similar symptoms as those seen in adult patients (Bleuler, 1950). However, it took more than two decades before a classification system was developed for infantile schizophrenia. In 1933, Potter (cited in Kanner, 1971) formulated a set of criteria that could be applicable to children:

To justify the diagnosis there must be (a) a generalized retraction of interests from the environment; (b) dereistic thinking, feeling, and acting;

(c) disturbances of thought, manifested through blocking, symbolization, condensation, perseveration, incoherence, and diminution, sometimes to the extent of mutism; (d) defect of emotional rapport; (e) diminution, rigidity, and distortion of affect; (f) alteration of behavior with either an increase of motility, leading to incessant activity, or a diminution of motility, leading to complete immotility or bizarre behavior with a tendency to perseveration or stereotypy. (p.17)

By the mid-1930s, infantile schizophrenia had become a known psychiatric entity.

In 1926, August Homburger (cited in Remschmidt et al., 1994) reported that childhood schizophrenia could be characterized by withdrawal, negativism, and strange and unexpected behavior. These behaviors would be considered “negative” symptoms according to current diagnostic classifications. Homburger also believed that schizophrenia had at least two manifestations: a hebephrenic form with cognitive deterioration and an acute catatonic form. Furthermore, according to Homburger, children also manifest premorbid characteristics and can be divided into three groups on the basis of these characteristics: “(1) children with premorbid normal development, good intellectual functions, and no character anomalies; (2) children with premorbid mental retardation; and (3) children who have normal intellectual functions but have character anomalies and display some types of strange behavior” (p.728).

In 1942, Kanner (cited in Volkmar, Klin, Marans, & McDougale, 1996) provided detailed clinical descriptions of 11 children who, in contrast to other developing infants, appeared to have a lack of interest in other people and presented with a number of unusual behavioral and developmental features, such as resistance to change, stereotyped and self-stimulatory movements, and areas of isolated interest. Kanner also described language anomalies in these children. This syndrome became known as early infantile

autism and for many years there was considerable disagreement about the validity of autism, that is, as a disorder separate from childhood schizophrenia (Werry, 1996).

During 1958, a group of clinicians created a committee in an attempt to clarify diagnostic considerations regarding childhood psychosis. At this time, the varied terminology created confusion regarding the extent of the clinical field covered by these terms (Creak, 1961). In May of 1960 a group of 13 interested workers from the fields of child psychiatry, pediatrics, genetics, psychology, and psychiatric social work gathered for a meeting to clarify the confused terminology and agree on a simple form of classification to be circulated to other clinicians. Creak (1961) presented the results of these professionals in their attempt to meet these goals. Regarding the terminology, the members of the working party agreed upon “schizophrenic syndrome in childhood” and nine diagnostic “points” were eventually generally accepted. The nine points were not intended as absolute criteria, in that all or any one must be present, and they were not developed for use as a rating scale. The points included impaired emotional relationships; confused personal identity; preoccupations; resistance to change in environment or routine; aberrant perceptual experiences, including oversensitivity or insensitivity to pain or temperature; illogical or exaggerated anxiety; speech and language difficulties; and disturbed motility, including hyperactivity and catatonic-like immobility (Creak, 1961). This classification system was deemed so broad that it encompassed almost any severe abnormality of development and gave it the title of childhood schizophrenia (Werry, 1996). Furthermore, the United States supported this concept and it was codified in the *Diagnostic and Statistical Manual of Mental Disorders, 2<sup>nd</sup> Edition* (DSM-II) in 1968. As a result, most research on childhood schizophrenia from about

1960 to 1980 may actually be about autism (Volkmar, 1996). In studies where cases of schizophrenia may have been included, it was quite difficult to disentangle the findings in order to apply them to the appropriate diagnosis (Werry, 1996).

The influential studies conducted by Kolvin (1971) led to the distinction between childhood schizophrenia and autism and its inclusion within adult-type schizophrenia in DSM-III. Kolvin (1971) found that within a large sample of “psychotic” children there was a bimodal distribution of onset: some children exhibited severe disturbance very early in life, whereas others had a period of several, or many, years of reasonably normal development before the onset of their difficulties. The group that had onset earlier in life had features resembling those of Kanner’s description of early infantile autism. However, those children in which onset occurred later in childhood appeared to have delusions, hallucinations, and other features more consistent with those observed in adults with schizophrenia. Furthermore, in the latter group, there was a high frequency of schizophrenia in first-degree relatives. Therefore, the course of these disorders and their clinical features were found to be markedly different.

#### *Diagnosis of Psychosis in Children*

The most recent classification system for the diagnosis of psychosis is provided by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV; APA, 1994). With regard to a childhood diagnosis of schizophrenia, it has been argued that child and adolescent schizophrenia should be referred to as *early onset* and that schizophrenia occurring before the age of 13 should be referred to as *very early onset* (Werry, 1996). However, under this classification system, the diagnosis of schizophrenia and other psychotic disorders in children (i.e., Psychotic Disorder, Not Otherwise

Specified) is based largely on the adult criteria. In order to receive a diagnosis of schizophrenia, according to these criteria, an individual must demonstrate two or more *characteristic, or core, symptoms* (i.e., delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms), *social/occupational dysfunction*; duration of disturbance for at least six months; and symptoms not due to schizoaffective or mood disorder or to the direct physiological effects of a substance or a general medical condition. DSM-IV does make a reference in the criteria with respect for autism, such that if there is a history of autism or another pervasive developmental disorder, the additional diagnosis of schizophrenia is made only if delusions or hallucinations are also present. The text also indicates few developmental differences in symptoms (i.e., less structured delusions and more visual hallucinations); however, it has been considered as paying insufficient attention to the manifestation of schizophrenia in children and adolescents (Werry, 1996). A diagnosis of Psychotic Disorder, Not Otherwise Specified, includes psychotic symptomatology (i.e., delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior) and is generally applied when there is inadequate information to make a specific diagnosis or if an individual presents with psychotic symptoms that do not meet the criteria for any specific psychotic disorder. In addition, it is important to highlight that the presence of disturbed thinking represents only one symptom of psychosis and is not required to meet criteria for diagnosis.

There are a number of factors that complicate the diagnostic process in children. First, some symptoms that have been associated with schizophrenia often occur in a variety of disorders in young children. For example, affective disorders in children have

been associated with the presence of hallucinations and delusions and there have also been reports of small samples of children who exhibit psychotic symptoms, such as auditory hallucinations, but do not meet criteria for schizophrenia (Russell, Bott, and Sammons, 1989). Furthermore, although it is unclear how the presence of a comorbid condition should be considered in the context of childhood schizophrenia, many studies have demonstrated high rates of comorbidity among children diagnosed with schizophrenia (Asarnow et al., 2004). Specifically, Russell et al. (1989) found that 68 percent of the schizophrenic children in their sample met criteria for another diagnosis, the most common being conduct/oppositional defiant disorder (31%) and atypical depression or dysthymic disorder (37%).

Second, developmental differences also need to be considered when diagnosing schizophrenia in children. For example, as articulated by Arboleda and Holzman (1985), developmental theory suggests that the young child's thought process is predominantly "magical." It is through the course of maturation that children develop adult-like reality testing and increasingly organized thought. Thus, because the speech of young children is frequently less logical and coherent than that of adults, instances of immature but adaptive thought that are typical in younger children may be easily confused with more pathological symptoms such as disordered thought and delusions (Asarnow, et al., 2004; Arboleda & Holzman, 1985). Therefore, one must be particularly careful when making this diagnosis in children. Methods of evaluating thinking disturbances in children are described in greater detail later in the chapter.

A third diagnostic dilemma when attempting to diagnose children who present with symptoms related to schizophrenia or schizophrenia-spectrum disorders is the

frequent insidious, as opposed to acute, onset of symptoms (Kumra, 1998). Although there are child cases of acute-onset schizophrenia, the majority of children tend to show insidious onset and patterns of earlier abnormalities prior to the onset of the full schizophrenic syndrome (Asarnow et al., 2004). Therefore, clinicians often come across children who present with symptoms associated with schizophrenia but do not fully meet criteria for a diagnosis of schizophrenia. This is often the case with children presenting with schizotypal personality disorder. Although schizotypal personality disorder is generally considered to be an adult diagnosis, studies have shown that children who meet criteria for schizotypal personality disorder show impairments similar to those seen in children with schizophrenia (Tompson, Asarnow, Goldstein, & Miklowitz, 1990). These diagnostic dilemmas underscore the need for assessment instruments that are sensitive to the evaluation of thought disturbance and other symptoms associated with psychosis in children in order to assist with differential diagnosis and treatment planning.

#### *Risk Factors Associated with Psychosis*

Within the realm of psychotic disorders, a great deal of research has focused on accurately detecting and classifying individuals who are at a heightened risk for developing schizophrenia or schizophrenic-spectrum disorders (Lenzenweger, 1989). One avenue many researchers have utilized is the study of relatives of schizophrenics, or high-risk (HR) research. HR research has been identified as a method of investigating the etiology of a disorder by studying individuals who have an increased risk for developing the disorder (Cornblatt & Obuchowski, 1997). Identifying and studying children with a positive family history of schizophrenia who are genetically at risk has been an important area of HR schizophrenia research because the risk of developing

schizophrenia for such individuals is approximately 10%, increasing to nearly 50% if both parents are affected, compared with 1% risk in the general population (Gottesmann, 1991).

In a recent review of HR schizophrenia research, Niemi, Suvisaari, Tullio-Henriksson, and Lönqvist (2003) sought to address questions related to developmental differences of HR children when compared to controls and to identify which developmental factors, if any, predict the development of schizophrenia-spectrum disorders in adulthood. After review of many HR studies dating back to the 1950s, Niemi et al. (2003) concluded that children at high risk for schizophrenia do, indeed, have more developmental problems than controls. It was reported that children at high risk for developing schizophrenia demonstrate abnormalities in neurological and motor development beginning in infancy, and many HR studies also found attentional weaknesses, and poorer social and school functioning among HR schizophrenia children when compared to controls (Erlenmeyer-Kimling & Cornblatt, 1992; Weintraub, 1987; Weintraub & Neale, 1984; Rolf, 1972; Garmezzy & Devine, 1984; Mednick & Schulsinger, 1968; Nagler & Glueck, 1985; Marcus, Hans, Nagler, Auerbach, Mirsky, & Aubrey, 1997). However, Niemi et al. (2003) noted that these findings were not specific to schizophrenia and that children at high risk for other disorders demonstrated similar developmental abnormalities. Based on their review, Niemi et al. (2003) reported that those factors which appear to predict schizophrenia include motor and neurological developmental problems, attentional weaknesses, poor social skills, and the presence symptoms associated with formal thought disorder. However, due to the low occurrence of individuals who actually develop schizophrenia, even within the high-risk group,