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Parental Attachment and Schizophrenia: Is There a Relationship?

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PARENTAL ATTACHMENT AND SCHIZOPHRENIA
IS THERE A RELATIONSHIP?

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Abstract

Although current research has studied the relationship between parental attachment and mental disorders, the results have been inconclusive. This study attempted to further previous research and focus on the relationship between parental attachment and schizophrenia in specific. The subjects consisted of two groups, adults that have been diagnosed with schizophrenia, and adults that are mentally healthy. Subjects from both groups completed Parker's Parental Bonding Instrument (1979). The two groups' scores were compared in an attempt to establish a relationship between parental attachment and schizophrenia. The schizophrenic group reported significantly less care than the normal group. There was no significant difference found between the two groups in overprotection; both groups reported high overprotection.

COMMITTEE IN CHARGE OF CANDIDACY

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DEDICATION

To my brother Mark, who is the reason I chose the topic that I did.

To my mother Patsy Tucker, for your love, support and belief in me.

My children Louie, Tricia and Danielle, for all your understanding, smiles and mealtime prayers.

Most of all to my husband Danny, for everything you do.

I Love You!

Table of Contents

LIST OF TABLES

Chapter I

Introduction

Parental Attachment and Schizophrenia: Is There a Relationship?

The study of parental attachment is not a recent phenomenon. The concepts now guiding attachment theory have a long developmental history (Bretheron, 1992). Since 1930, John Bowlby has studied the bond between maternal loss or deprivation and later personality development. Concurrently Mary Ainsworth developed the "security" theory. One of the major beliefs of security theory is that infants and young children need to develop a trusting parental relationship before going out into unfamiliar situations.

In 1950, John Bowlby and Mary Ainsworth collaborated and developed the origins of attachment theory. Bowlby focused on concepts from ethology, cybernetics, information processing, developmental psychology and psychoanalysis. Ethology is work based on direct observation of infants and children. From this he formulated the basic tenets of the theory. He changed the ideas about a child's tie to the mother, and its disruption through separation, deprivation and bereavement. Ainsworth helped expand the theory by introducing the concept of an attachment figure as a secure base from which an infant can explore the world. She also examined maternal sensitivity to infant signals and its role in the development of infant-mother attachment patterns (Ainsworth, 1967).

The first cases of schizophrenia appeared in print in 1809 by John Haslam of the Bethlem Royal Hospital in London and Philippe Pinel of the Salpetriere asylum in Paris. They both independently produced and expanded second editions of books on mental illness that had been

published previously; they contained the first reports of schizophrenia in its "chronic" form (Noll, 1992). Kurt Schneider, a German psychiatrist, proposed a list of symptoms which he called "first rank" symptoms, meaning that when one or more of them are present , they point strongly toward schizophrenia as the diagnosis (as cited in Torrey, 1995). The list consists of auditory hallucinations of touch and mind, paranoia, and delusions of perception. Psychotherapists that have observed and researched schizophrenia support the belief that it is related to disturbances of human personality development. Consequently, they propose that interactional relationships, especially with the mother, contribute to mental dysfunction, not only at the psychological but also at the biological level. This is separate from factors related to genetic vulnerability and other somatic-level influences (Alanen, 1994).

Several studies have found a significant relationship between parental attachment and mental disorders. An inpatient study revealed that patients diagnosed with borderline personality disorder experienced higher frequencies of lengthy separations, foster home placement, and physical and sexual abuse (Links, Offord & Eppel, 1988). Another inpatient study facilitated by Herman, Perry and Kolk (1989) found that individuals diagnosed with borderline personality disorder had a higher occurrence of physical and sexual abuse, and experienced domestic violence more than subjects with no borderline diagnosis. In a study using an attachment framework, Sperling (1991) found more negative parental attachment reported by inpatient and day-hospital patients diagnosed as borderline than a comparison group of college students. In another study with much the same results, researchers found that patients diagnosed as borderline

reported their parents as less loving, affectionate, understanding, respectful, attentive, responsive and more critical and abusive than the college sample (Sack, Sperling, Fagen & Foelsch, 1996).

As a result of assessment of attachment beyond infancy, five attachment-related risk factors were identified by Main (1996) as influencing the development of mental disorders. The five factors are as follows:

> (1) failure to form an attachment between 6 months and 3 years (maternal deprivation); (2) the "organized" forms of insecure attachment status; (3) major separations from and permanent loss of attachment figures; (4) disorganized attachment in response to early maltreatment, and (5) disorganized attachment as a second-generation effect of the parents' own trauma (p. 241).

Any of the risk factors can be determined by an attachment assessment.

Statement of the Problem

The purpose of this study is to further investigate the relationship between parental attachment and schizophrenia. The effects of negative parental attachment patterns have been studied and positive correlations have been found between parental attachment and mental disorders. There is little information found about the relationship between parental attachment and schizophrenia. The significance for this study is to promote information related to the importance of a strong parental attachment that may prevent vulnerabilities in a child that could contribute later to schizophrenia or other mental disorders. Bowlby (1951) stated, "That to grow up mentally healthy, the infant and young child should experience a

warm, intimate, and continuous relationship with his mother (or permanent mother substitute) in which both find satisfaction and enjoyment" (p. 13).

Chapter II

Review of Related Literature

The study of parental attachment and the study of schizophrenia are not a modern phenomenon. On the contrary, the continuum upon which schizophrenia has been studied by researchers begins with defining schizophrenia, and identifying the cause(s). The attachment theory has been studied and developed by John Bowlby and Mary Ainsworth since the early 1900's (Bretherton, 1992). Presently there is little information found about the relationship between parental attachment and schizophrenia.

Clinical Definition of Schizophrenia

Schizophrenia is classified as a psychotic disorder in the DSM IV (1994) and is defined as a disturbance that lasts for at least six months and includes at least one month of active phase symptoms. The Diagnostic Criteria for Schizophrenia are two (or more) of the characteristic symptoms must be predominant during a one month time period. These symptoms include delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, and negative symptoms are comprised of affective flattening, alogia, or avolition. Only one of the characteristic symptoms is necessary if delusions are bizarre or the individual hears voices.

Subtypes of schizophrenia include Paranoid, Disorganized, Catatonic, Undifferentiated and Residual. They are defined by the major symptomatology at the time of assessment (DSM IV, 1994). The diagnosis of a particular subtype is based on symptoms that elicited the most recent assessment or admission to clinical care and may change over time. Often the patient may have symptoms that are characteristic of one or more subtypes.

Etiology

Up until the late 1960's, schizophrenia was blamed on the family, more specifically, the parents (Walsh, 1985). In 1968 some studies were done that concluded that being biologically related to a person with schizophrenia increases the risk of the disorder. These are known as the "Danish" studies because they were conducted in Denmark. Rosenthal (first in 1968 and then in 1971) compared the mental health of adopted offspring of one or more schizophrenic parents with that of control adoptees whose biological parents were mentally healthy. Kety (in 1968 and 1971) compared the incidence of mental illness in the biological relatives of two groups of adoptees - one group diagnosed as schizophrenic and the other mentally healthy. The studies proved positive for a genetic component in schizophrenia. The Danish studies were accepted by the scientific community as having very strong evidence that there is a genetic factor to at least some forms of schizophrenia.

Schizophrenia afflicts 1 in every 100 persons. Psychiatrist E. Fuller Torrey has spent time living and working in Ireland, tracking the phenomenon of a high schizophrenia rate. He has concluded that one Irishman out of twenty-five will have schizophrenia (Walsh, 1985). The average age of onset for males is about twenty and the mid-twenties for females. Certain brain studies have suggested that women have less specialization of the two hemispheres of their brain. There is speculation that schizophrenia may be a disease of the left brain.

Vulnerabilities to Schizophrenia

Alanen (1994) is a psychiatrist who has more than 30 years experience in the individual psychotherapy of schizophrenic patients, and

has worked with families of schizophrenics for almost the same length of time. He supports the view that schizophrenia is associated with disturbances of personality development. He believed that child-parent relationships have two dimensions. The parents are the initial significant emotional focus for their children and are teachers to them. He described both dimensions as reciprocal by nature. In working with schizophrenic patients, Alanen focused on the patients' environment of growth. Family therapy allowed him to observe the parents' nature as well as the interpersonal family relationships. He observed situations which disclosed schizophrenic

patients' developmental needs and the parents' reactions to them. This helped him understand the reciprocal quality of the family elements impacting both normal personality growth and its disruptions.

Alanen (1994) formulated five major propositions to integrate the psychodynamic concepts dealing with vulnerability to schizophrenia. Proposition 1 was based on the notion that the origins of later schizophrenia are found in the early frustrations that caused a predominant part of the libidinal development to be ceased at a phase where it was basically introspective. Alanen reported that he often saw evidence that the mother-child relationship began with stress and anxiety. Proposition 2 focused on the effects of parental personality on the parent-child relationship. He observed that only 10% of the parents of schizophrenic patients are diagnosed with a psychotic disorder, but personality disorders are much more prevalent among them. Alanen speculated that these parental personality disorders may result in a relative lack of possibilities for healthy identification patterns to exist since many of the parents displayed

paranoid characteristics or other signs of psychosis. Proposition 3 referred to the results parental disturbances have on children in relationship to the difficulty they create in the process of common psychological separation. Parental projective identifications frequently support the disturbance of the child's separation-individuation development in both early childhood and during adolescence. In Proposition 4 Alanen defined the relationships of children with their parents as being predominantly self-object relations. He stated, "This is especially true of the basic processes whereby children build up their personalities both through the empathic love their parents show toward them and through identification with parents" (p. 59). Proposition 5 focused on the abnormal mental functionings of schizophrenia and the dynamics of the family in which the individual members are constantly influencing each other. Alanen summed his five propositions into one idea, "The common denominator is the lack of sufficiently empathic responses from the self-objects to support the child's individual development" (p. 60).

Environmental and Genetic Factors Related to Schizophrenia

Tienari and his colleagues (as cited in Lehtonen, 1994) directed a study related to the attribution of schizophrenia. Professor Tienary and his team focused on both biological predisposition and environmental stress. In an effort to explain the combined effects of both, they gathered information about 291 children given away for adoption by schizophrenic mothers. Of that population, 155 children, with their biological and adoptive parents, were included as the sample group in the study. A control group of 185 children was collected for comparison, and their parents (adoptive and biological) were also researched.

The results of the study found 30% of the sample group showed

serious psychopathology, the comparing figure was 15% in the controls; grouping together all functional psychoses resulted in an even clearer difference between sample and control adoptees. When the DSM-III-R schizophrenic group alone was considered, the distinction was also quite evident. The results supported the genetic contribution to the development of schizophrenia.

However, distinct differences appeared only in adoptees raised in families which were classified as disturbed, and not in healthy families, despite the presence of a genetic factor in the child (Lehtonen, 1994). First, a positive relationship was found between the adoptive mother's mental health and the genetic factor. Secondly, the mental health of each parent played an independent role as a predictor of schizophrenia; if both parents were classified as disturbed, the combined effect of this had the highest repercussion for predicting schizophrenia. Tiernari and his colleagues concluded that there are two factors essential for a schizophrenic development in the adoptee: a genetic factor and a dysfunction in the psychological interaction between the child and the parents (Lehtonen, 1994).

Tiernari's research also inspired the issue of how combined genetic-environment effects are created, and how this issue can be approached from many different perspectives. There may be discrepancies between those who have a genetic predisposition to schizophrenia and those who do not in the initial process of bonding between pleasure and physical contact in the infants. Genetically vulnerable infants have a need for more intense care and increased fundamentally comforting experiences in their early psychophysical interaction with the mother, than those without this

vulnerability. They could be more sensitive to environmental impressions. The symptoms of schizophrenia may also be viewed as the effect of a collapse of the initial bond between the physiological processes of the body and psychological gratification (Lehtonen, 1994).

Parental Attachment

John Bowlby and Mary Ainsworth developed the origins of attachment theory. Bowlby's first statements of attachment theory, building on concepts from ethology and developmental psychology were presented in three now classic papers: "The Nature of the Child's Tie to His Mother" (1958), "Separation Anxiety" (1959), and "Grief and Mourning in Infancy and Early Childhood" (1960).

"The Nature of the Child's Tie to His Mother" (Bowlby,1958), summarizes and then rejects those Freudian psychoanalytic explanations for the child's libidinal tie to the mother in which need satisfaction is seen as first and attachment as a derivative of it. Using Freud's (1905,1953) idea that mature human sexuality is made up of component instincts, Bowlby reported that 12-month-olds' obvious attachment behavior is made up of several component instinctual responses that help in securing the infant to the mother and the mother to the infant. These responses included sucking, clinging and following along with the signaling behaviors of smiling and crying. The instinctual responses mature comparatively independently during the first year of life and become increasingly combined and centered on a mother figure during the second six months. Bowlby viewed clinging and following as perhaps more critical for attachment than sucking and crying. He also recognized ethological concepts, such as sign stimuli or social releasers that cause certain responses to be stimulated and stopped

or shut down. The stimuli are sensory impressions derived from the environment. Bowlby also focused on the difference between the old social learning theory idea of dependency and the new idea of attachment, emphasizing that attachment is not the same as regression, but rather performs a natural, healthy role even in adult life.

In the second original paper, "Separation Anxiety," Bowlby (1959) asserted that the original theory does not explain the intense attachment of infants and young children to a mother figure or their emotional responses to separation. Robertson (as cited in Bowlby, 1959) recognized three aspects of separation response: detachment - related to defense mechanisms, despair - related to grief and mourning, and protest - related to separation anxiety. Bowlby speculated that infants and children experience separation anxiety when a situation stimulates both escape and attachment behaviors but an attachment figure is not available. He also claimed that excessive separation anxiety is caused by negative family experiences such as frequent threats of abandonment or rejection by parents, or a child's feelings of guilt related to a parent's or sibling's illness or death. Bowlby also stressed that, in some instances, separation anxiety can be very low or non-existent, giving a false impression of maturity. He credits this condition to defensive processes. This refers to the concept that if a child experiences little to no separation anxiety, he will not develop self-reliance.

In the third paper, "Grief and Mourning in Infancy and Early Childhood", Bowlby (1960) questioned Anna Freud's argument that deprived infants are unable to mourn because of a lack of ego development and consequently experience only brief bouts of separation anxiety if a sufficient substitute caregiver is available. Bowlby speculated that grief

and mourning methods become visible in children and adults whenever attachment behaviors are activated but the attachment symbol continues to be inaccessible. He also proposed that when there are too many substitutes, too often, it may result in an inability to form deep relationships.

Mary Ainsworth (1963) conducted the first study of infant-mother attachment from an ethological perspective in 1953 in Uganda. She observed 26 families with unweaned babies (ages 1-24 months) every 2 weeks for 2 hours per visit over a 9 month period. She was always accompanied by an interpreter in the family living room, where Ganda women frequently entertain in the afternoon. Ainsworth's goal was to determine when the infant's signals and behaviors became preferentially directed toward the mother.

Several years later, inspired by Bowlby's "The Nature of the Child's Tie to His Mother" (1958), Ainsworth (1967) published the data from the Ganda Project. Ainsworth observed three infant attachment patterns:

> Securely attached infants cried little and seemed content to explore in the presence the of mother; insecurely attached infants cried frequently even when held by their mothers, and explored little; and not yet attached infants manifested to differential behavior to the mother. (p. 400)

The results of the study concluded that secure attachment was significantly correlated with maternal sensitivity. Babies of sensitive mothers were observed to be securely attached, while babies of less sensitive mothers tended to be classed as insecure. Infant security was also correlated with the mothers' enjoyment of breast feeding. These results prompted some of Ainsworth's later work, although the assessments used were not yet as advanced as those developed for subsequent studies.

Ainsworth did a second observational study in 1963 (as cited in Bretherton, 1992) involving 26 Baltimore families. They were recruited while the mothers were pregnant. Eighteen home visits were scheduled, beginning in the first month and ending at 54 weeks. The visits lasted about 4 hours, which proved to be long enough for the mothers to feel comfortable following their regular daily routine. About 72 hours of data was collected in total per family.

Mothers displayed remarkable differences in how promptly, appropriately, and sensitively they responded to their infants' signals. Feeding was a pleasant harmonious occasion for some mother-infant pairs. Other mothers had problems getting in sync with the baby's signals. As a result, these babies were inclined to struggle, choke, and spit up. In face-to-face interactions between mother and infant during the period from 6 to 15 weeks, the same clear patterns were observed. Bell and Ainsworth (as cited in Bretherton, 1992) concluded that, "An infant whose mother's responsiveness helps him to achieve his ends develops confidence in his own ability to control what happens to him" (p. 765). This was in response to the idea that too much maternal attention might cause spoiling.

The results of the study concluded that maternal sensitivity in the first quarter was related with more peaceful mother-infant relationships in the fourth quarter. Babies whose mothers had been very responsive to crying during the early months were inclined to cry less, depending on facial expressions, gestures, and verbals for communication (Bretherton, 1992). The infants whose mothers held them a lot during the first quarter sought less attention during the fourth quarter, but when interaction occurred it was rated as more satisfying and loving. Ainsworth (as cited in

Bretherton, 1992) hypothesized these results by means to infants' expectations, based on prior satisfying or rejecting experiences with the mother.

Information About Attachment Related Studies

Many of Ainsworth's original findings relating to strange situation behavior have been used for further research. In a study in 1969, Ainsworth researched the ideas of attachment behavior from an ethological-evolutionary perspective. This refers to direct observation of infants' progression over a period of time (Ainsworth & Bell, 1970).

A laboratory situation was set up to observe the balance of attachment and exploratory behaviors. The study focused on the limit to which the infant could use his mother as a secure base from which he could explore a strange environment, feeling comfortable by her presence. It was also designed to observe the extent to which infants would display attachment behaviors over exploratory behaviors under conditions of distress presented by the appearance of a stranger and under circumstances of separation from and reunion with the mother (Ainsworth & Bell, 1970).

The subjects consisted of 56 infants reared by white middle class intact families. A subsample of 23 subjects, who had been observed from birth onward, were observed at 51 weeks in the strange situation. The second group of 33 subjects was observed in the strange situation at 49 weeks of age (Ainsworth & Bell, 1970).

The procedure for the strange situation consisted of eight episodes of the gentle approach of a stranger, not intended to be more distressing than what an infant was likely to experience in ordinary life. The experimental room was arranged so that a 9x9 square foot of floor space was marked off

to assist in recording of location and movement. At one end of the room there was a baby's chair surrounded by lots of toys. The mother sat in a chair near the other end of the room, and the female stranger was positioned at the opposite side, near the door. The baby was set down in the middle of the triangle formed by the three chairs and left to move freely throughout the room. The mother and the stranger were informed of their roles beforehand. In an adjacent room the subject's behavior was observed through a one-way vision window (Ainsworth & Bell, 1970).

The results indicated that the presence of the mother stimulated exploratory behavior, while her absence reduced exploration and increased attachment behaviors. Behaviors such as crying and looking increased during separation occurrences. Reunion events encouraged clinging and proximity-seeking behaviors. A significant number of subjects were ambivalent during reunion episodes. This was displayed by an increase in contact-resistant behaviors simultaneously with clinging behaviors. Some subjects also exhibited proximity-avoiding behavior upon reunion with the mother (Ainsworth & Bell, 1970).

Mary Main (1996) conducted another study on Strange Situation Behavior in infants using Ainsworth's classifications which are grouped A, B, and C (insecure-avoidant, secure, and insecure-resistant/ambivalent). Many abused infants and about 13% of infants in a low-risk Bay Area sample were found unclassifiable in Strange Situation Behavior. An analysis of 200 unclassifiable Strange Situation videotapes conducted by Main and Solomon (as cited in Main, 1996) disclosed that the majority of these infants exhibited different displays of bizarre or conflicted behaviors in the presence of the parents. This is supported by rocking on hands and

knees with face turned away after a failed advance; discontinuing all movement, arms in air, with a dazed expression; moving away from the parent to lean head on wall when afraid; and standing to welcome the parent then falling flat. As a result of this study, a fourth infant attachment category was added, insecure-disorganized-disoriented (Group D). Fifteen to 25% of infants in low risk samples (including many previously assigned to Group B) are now classified as disorganized.

Infant Attachment and Mental Disorders

Disorganized infants are believed to suffer the most positive risk for mental disorder. The first report of a connection between infant attachment and adolescent disorder appeared out of Egeland & Srowfe's (as cited in Main, 1996) Minnesota Poverty Sample, with 17-year-olds classified as disorganized with mother in infancy showing the highest marks for psychopathology on the K-SADS. In 1996 Lyons-Ruth (1996) found that disturbed-aggressive school behavior was associated with infant disorganized attachment status in a poverty sample. In 1995 Solomon, George, & Dejong found the same results with D-controlling behavior in a low-risk sample of 6-year-olds. D-controlling behavior was also found by Greenberg, Speltz, DeKlyen, and Endriga (1991) in a large number of 4-year-olds with acting out problems. Liotti (1992) hypothesized that disorganized infants have greater vulnerability to dissociative disorders, a theory that was supported by an anamnestic (a history of the illness as reported by the patient) study of dissociative versus other clinic patients and by a study that disorganized attachment predicts dissociative behavior in elementary school and high school. Disruptive behavior disorders and dissociative disorders will only manifest in a low percentage of these

infants, depending on environmental circumstances, the characteristics of other relationships, as well as genetic factors.

Attachment and Borderline Personality Disorder

According to Bowlby (1977), borderline personality disorder is a condition of deep insecure attachment, with intense fluctuations between attachment and detachment, between a hunger for secure affectional ties and a fear and avoidance of such closeness. As a result of early traumatic childhood experiences, attachment feelings and behavior have been absent and confused causing a greater sensitivity to separation and loss. These individuals are unaware of the reasons for their reactions because thoughts and feelings have been detached from the situations that evoked them. Melges and Swartz (1989) compare the changing behavior in borderlines to that of prickly porcupines; they need someone, but they are driven away by fear if anyone gets too close. They are in need of security, but are afraid to allow themselves to be attached to anyone for fear of rejection and abandonment and the mental anguish and resentment that it would cause.

Bowlby (1988) speculated that certain types of family experiences influence the developing personality and may cause anxiety due to separation. He recognized a series of responses to separation: beginning with protest followed by hopelessness and depression and finally a state of emotional detachment if the separation lasts more than a short period of time or if circumstances during are severe.

Researchers Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target, and Gerber (1996) stressed that early painful experiences could suppress mental processes such as introspection and mental roles. In an attempt to relate attachment to borderline personality disorder, the AAI

(Adult Attachment Interview) was given to a group of inpatients who were diagnosed as borderline personality. The results of the interview implied that three characteristics separated them from other personality disorder diagnoses. The characteristics included higher prevalence of sexual abuse, lower ratings of introspection, and less resolution of the abuse. The inpatients also reported their parents as less affectionate and more neglectful than non-borderline patients. Fonagy and colleagues concluded that the abused child learns that a parent will not be appropriately and consistently responsive so he does not develop a feeling of security in relation to his mental world.

Studies Related to Parental Attachment and Schizophrenia

A study involving a group of adult schizophrenic patients assessed how the patients perceived their childhood; if their views differed from non-schizophrenic adults, and to ascertain any connection between parental methods as understood by the patient, childhood personality as understood by the mother, and current symptoms. Results indicated that the greatest difference between the parents of schizophrenic patients and parents of normal subjects was in warmth; schizophrenic patients perceived their parents as exhibiting much less warmth. A relationship was found between the severity of current symptoms and perceived parental rearing attitudes. The researchers concluded, "The more rejected and/or overprotected the patient felt as a child, the worse current symptoms were; the more warmth shown to the patient as a child, the less severe current symptoms were" (McCreadie, Williamson, Athanes, Connolly & Tilak-Singh, 1994, p. 347).

Rund (1994) studied the relationship between psychosocial and cognitive functioning in schizophrenic patients and expressed emotion (EE)

and communication deviance (CD) in their parents. EE refers to a measure of very critical and/or emotionally enmeshed attitudes toward the patient by the parents. CD refers to the level of abnormal or negative communication patterns of the parents.

Eleven patients diagnosed with schizophrenia along with their parents were assessed over a two year treatment program. The assessments for the patients included the Global Assessment Scale (GAS), Brief Psychiatric Rating Scale and a cognitive assessment pack. The tests for the parents consisted of the Communication Conflict Situations and the Camberwell Family Interview. A significant relationship was found between patients' GAS score and mother's critical component score. Parents' EE level was found to be closely associated with the cognitive variable of backward masking (relapse risk in patient), which was one of the cognitive measures used. The results of the masking measure found a significant difference between parents who lowered their EE levels during the two year treatment period and those who did not. There was no significant relationship found between patient cognitive functioning and parents' type of communication (Rund, 1994).

The main focus of the study was the relationship between the parents' EE factors and patients' cognitive functioning. A connection was found between the patients' psychophysiological measures and some EE components. The results indicated that mothers' over-involvement score is also closely related to cognitive functioning measures in the offspring (Rund, 1994).

In another study to compare parental attachment of discordant schizophrenic twins, the PBI (Parental Bonding Instrument) was used. The

sample consisted of 12 identical and 19 same-sexed fraternal twin pairs dissonant for the diagnosis of schizophrenia. The PBI was given to each participant by a personal interview. The results indicated, that "The schizophrenic twins reported less care and more overprotection compared to his or her co-twin" (Onstad, Skre, Torgersen and Kringlen, 1994, p. 68). Three separate theories were developed to help interpret these findings. They are as follows:

(1) The findings may be due to retrospective bias.

(2) The parents treated the twins differently and in this way contributed to the pathological development in the schizophrenic twin.

(3) Premorbid abnormalities in the twin with a disposition for schizophrenia may have caused the parents to raise the twins differently.

Many aspects of schizophrenia and parental attachment were researched and reported. Studies related to schizophrenia supported both genetic and environmental factors as contributing to the origination and severity of symptoms. Parental attachment studies reported negative parental attachment patterns as having adverse effects on offspring. Infant attachment and mental disorder studies found a significant relationship between the two.

In the attachment studies on schizophrenia in specific, schizophrenic subjects reported more negative parental attachment than normal subjects. A relationship was also found between reported negative parental attachment and severity of symptoms.

Statement of the Hypothesis

In an attempt to establish a relationship between parental attachment and schizophrenia, an instrument that accurately measures adults' perceptions of their parents' rearing behaviors is warranted. Therefore, this study will apply the Parental Bonding Instrument (PBI) as a method to measure parental attachment. The focus of this study is to examine the hypothesis that adults diagnosed with schizophrenia report significantly greater negative parental attachment patterns than those who do not have schizophrenia. The alternative hypothesis is that adults diagnosed with schizophrenia report less care and more overprotection than those who do not have schizophrenia. The null hypothesis is that there is no significant difference in reported parental attachment patterns of adults diagnosed with schizophrenia and those who do not have schizophrenia.

Chapter III

Method

Participants

There were two groups in this study. The sample group were all adults that have been diagnosed with schizophrenia and the control group consisted of adults that have never been hospitalized for a mental illness.

The schizophrenic group was selected from Whispering Oaks Health Care Center. It is a residential facility for individuals with mental illnesses. Of the 70 residents, 35 have been diagnosed with schizophrenia. All of the residents with schizophrenia participated in the study. There were 21(60%) males, and 14 (40%) females. Their ages ranged from 18-60 years; 2 (5.7%) were 18-25, 22 (62.9%) were 26-45, 5 (14.3%) were 46-55 and 6 (17.1%) were 56-60 years of age. The group consisted of 27 (77.1%) Caucasians, 7 (20%) African Americans and 1 (2.9%) Asian.

The control group were all employees of A. G. Edwards. Criterion for participation was no recorded history of mental illness. Sixty questionnaires were mailed randomly to the employees by someone in Human Resources. Thirty-nine subjects that fit the criterion participated in the study. There were 21 (53.8%) males and 18 (46.2%) females. Their ages ranged from 18-60 years; 2 (5.1%) were 18-25, 32 (82%) were 26-45, 4 (10.3%) were 46-55 and 1 (2.6%) was 55-60 years of age. The race distribution was 22 (56.4%) Caucasians and 17 (43.6%) African Americans.

Instrument

The instrument that was used for this study is the PBI (Parental Bonding Instrument) which was created by Parker, Tupling and Brown in 1979. It measures adults' perceptions of their parents' rearing behaviors. It

contains 25 questions and comprises two factorially-originated scales: care and (over)protection. The care component has two poles. One is defined by affection, emotional warmth, empathy and closeness; the other pole is defined by emotional coldness, indifference and neglect. The (over)protection component is also bipolar and has one dimension defined by control, overprotection, intrusion, excessive contact, infantilization and prevention of independent behavior; the other is defined by questions pondering concession of independence and autonomy.

The two dimensions of Care and Overprotection may be scored as high or low; consequently, the instrument defines 4 different parental styles. Assignment to high or low categories is based on the cut-off scores of 27.0 for care and 13.5 for protection. Low scores on both dimensions are identified as "neglectful parenting". "Optimal parenting" is characterized by high care and low overprotection. Low care and high overprotection is called "affectionless control" and "affectionate constraint" is characterized by high scores on both dimensions (Parker, et al., 1979).

The PBI can be implemented by face-to-face interviews using an audio tape or self-report questionnaires. For purposes of confidentiality and practicality, self-report questionnaires were used for this study. It has been proven to be an appropriate instrument for both psychiatric patients and mentally healthy individuals. It is among the most widely used measures for the assessment of adults' perceptions of their parents' rearing behaviors and has been used previously in studies with mentally ill patients and schizophrenia in specific (Parker, et al., 1979, Onstad et al., 1994, Barker, Helmes & Kazarian, 1984).

The PBI was found to have sufficient internal consistency,

reliability, and satisfactory discriminatory power in the sense that it differentiates between psychiatric patient groups on the one hand and normal population controls on the other. It has been found to have a Pearson correlation coefficient of 0.704 ($P<0.001$) for reliability and validity. It has a test-re-test reliability of 0.761 ($P<0.001$) for the Care scale and 0.628 ($P<0.001$) for Overprotection. The split-half reliability measured at a Pearson correlation coefficient of 0.879 ($P<0.001$) for the Care scale and 0.739 ($P<0.001$) for the Overprotection scale. It has an inter-rater reliability of 0.851 ($P<0.001$) on the Care pole and 0.688 ($P<0.001$) on the Overprotection pole (Parker, et al., 1979). A copy of the demographic sheets and questionnaire is provided.

The PBI has been used successfully in previous studies with individuals diagnosed with schizophrenia (Parker et al., 1982, Baker et al., 1984, Onstad, Skre, Torgensen & Kringlen, 1994).

Procedures

The design used for this study was causal-comparative since the purpose was to attempt to identify if a cause-effect relationship between parental attachment and schizophrenia exists. It was the most appropriate design because the groups were already different on the independent variable; thus there is a lack of random assignment, manipulation and control of the independent variable.

A questionnaire along with a demographic sheet was distributed to each participant. The participants were directed to answer the questions about their mother or primary caregiver. There was no distinction made between paternal and maternal attachment.

The normal population was e-mailed a questionnaire at work and

requested to return it to the Human Resource office within one week. The schizophrenic population was assisted by staff members at the facility in filling out questionnaires. Each schizophrenic subject received 50 cents to purchase a soda for participation.

Subjects in both groups completed the demographic sheets and questionnaires. The two groups' scores were compared in an attempt to establish a relationship between parental attachment and schizophrenia.

A Likert scale from 0 to 3 was used. The 12 items of the Care scale allowed a maximum score of 36 and the 13 items of the Overprotection scale allowed a maximum score of 39. The scores of both groups were calculated and t-tests were used to determine if there was a significant difference between the two groups' scores on the PBI. Assignment to high or low categories based on the cut-off scores of 27.0 for Care and 13.5 for Protection were also determined.

Chapter IV

Results

Test of normality for Care scores and Overprotection scores for normal and schizophrenic groups showed no evidence to suggest that normality did not exist on the two scales. It is therefore assumed that Care and Overprotection scores for normal and schizophrenic groups are normal in distribution. Table 1 presents the test for normality for Care scores and Overprotection scores for normal and schizophrenic groups.

Table 1

Test of Normality for Care Scores and Overprotection Scores for Normal and Schizophrenic Groups

		Kolmogorov-Smirnov[a,b,c]		
	Population	Statistic	df	Significance
CARE	Normal	.134	38	.084
	Schizophrenic	.120	35	.200*
OVER-PROTECTION	Normal	.085	38	.200*
	Schizophrenic	.074	35	.200*

*. This is a lower bound of the true significance

a. Lilliefors Significance Correction

b. CARE is constant when population = 11.00. it has been omitted.

c. OVERPROTECTION is constant when population = 11.00. it has been omitted.

In Table 2, the mean scores and standard deviations of the Care scale on the PBI are presented. The mean score for the normal group was 28.26 and 23.17 for the schizophrenic group. The PBI has assigned high or low categories based on the cut-off score of 27.0 for the Care scale. The normal group is categorized as high care and the schizophrenic group as low care. The schizophrenic group reported significantly less care than the normal group.

Table 2

Means and Standard Deviations of CARE Scale on the PBI for Normal and Schizophrenic Groups

	Normal (n = 39)		Schizophrenic (n = 35)	
Scale	M	SD	M	SD
CARE	28.263	5.356	23.171	9.590

In Table 3, the mean scores and standard deviations for the Overprotection scale are presented. The mean score for the normal group was 15.07 and 16.82 for the schizophrenic group. No significant difference between the mean scores of the two groups was found. Based on the cut-off score of 13.5 for overprotection, both groups would be categorized as high overprotection.

Table 3

Means and Standard Deviations for Overprotection Scale on the PBI for Normal and Schizophrenic Groups

	Normal (n = 39)		Schizophrenic (n = 35)	
Scale	M	SD	M	SD
OVERPROTECTION	15.079	7.361	16.829	16.000

Table 4 presents a t-test for equality of means for the two groups combined. The normal group reported high care and high overprotection, which describes the "affectionate constraint" parenting style. The schizophrenic group reported low care and high overprotection which indicates "affectionless control" parenting style. "Affectionless control" is considered to be a more negative parental style than "affectionate constraint". Therefore, the schizophrenic group reported more negative parental attachment than the normal group, which supports the stated hypothesis.

Table 4

t-test for Equality of Means

	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confid. Interval Lower	Upper
CARE							
Equal variances assumed	2.830	71	.006	5.092	1.799	1.504	8.679
OVERPROTECTION							
Equal variances assumed	-.898	71	.372	-1.749	1.948	-5.635	2.136

$p<.05$

Chapter V

Discussion

The hypothesis was tested by comparing the two groups on the PBI. The schizophrenic group reported less care than the normal group. Both groups reported high overprotection. According to the results of this study, one half of the alternative hypothesis is supported. The schizophrenic group reported significantly less care than the normal group, but there was no significant difference reported between the two groups on overprotection. The normal group was expected to report less overprotection than the schizophrenic group and score within the range of low overprotection.

The results of this study may be an indication that the Care component is a more critical element in parenting than Overprotection. All of the studies mentioned involving parental attachment and schizophrenia resulted in low care in the sample groups and high care in the control groups. There was a greater significant difference in all of the studies between the two groups on the Care scale than on the Overprotection scale. It is speculated that negative parental attachment may be defined by low care.

These findings may be due to invalid responses based on retrospective bias of subjects. The PBI only measures perceived parental characteristics that cannot be proven.

The sample group all live in a residential facility. They have severe psychosis and are unable to function independently in society. Due to the severity of their symptoms, they may not have responded accurately to the questions. They may be demented and confused and unable to give a valid

account of their mother's behaviors in the first 16 years. The schizophrenic sample groups mentioned were represented as having less severity of symptoms than the sample group in this study.

The control group reported high overprotection. It is speculated that this is not characteristic for a control group. All of the subjects in this group were white collar employees of A. G. Edwards. The results may be indicative of the lack of diversity within this group. There were thirty-nine participants, which is not a significant representation of the general population.

The parental style of "affectionless control" was acknowledged by the schizophrenic group in this study and was also found in other clinical samples mentioned. "Affectionless constraint" was observed by the control group in this study and is not specific for control groups in other clinical studies. "Optimal parenting" is typically reported by the control groups in similar studies using the PBI. Further research of parental attachment and schizophrenia using larger groups and a more random selection of subjects may result in a greater support for the stated hypothesis.

Normal Population Demographic Sheet

Circle one answer for each question.

1. Gender
    a. Male
    b. Female
2. Age
    a. 18-25 years of age
    b. 26-45 years of age
    c. 46-55 years of age
    d. 55 or older
3. Race
    a. Non-Hispanic White/Caucasian
    b. African American
    c. Other
4. Have you ever been hospitalized for a mental illness?
    a. Yes
    b. No

Schizophrenic Population Demographic Sheet

Circle one answer for each question.

1. Gender
    a. Male
    b. Female
2. Age
    a. 18-25 years of age
    b. 26-45 years of age
    c. 46-55 years of age
    d. 55 or older
3. Race
    a. Non-Hispanic White/Caucasian
    b. African American
    c. Other

Questionnaire for both populations

This questionnaire lists various attitudes and behaviors of parents. As you remember your Mother, or your primary caregiver in your first 16 years, would you place a check in the most appropriate brackets next to each question.

	Very like	Moderately like	Moderately unlike	Very unlike
1. Spoke to me with a warm and friendly voice	( )	( )	( )	( )
2. Did not help me as much as I needed	( )	( )	( )	( )
3. Let me do those things I liked doing	( )	( )	( )	( )
4. Seemed emotionally cold to me	( )	( )	( )	( )
5. Appeared to understand my problems	( )	( )	( )	( )
6. Was affectionate to me	( )	( )	( )	( )
7. Liked me to make my own decisions	( )	( )	( )	( )
8. Did not want me to grow up	( )	( )	( )	( )
9. Tried to control everything I did	( )	( )	( )	( )
10. Invaded my privacy	( )	( )	( )	( )
11. Enjoyed talking things over with me	( )	( )	( )	( )
12. Frequently smiled at me	( )	( )	( )	( )
13. Tended to baby me	( )	( )	( )	( )
14. Did not seem to understand what I needed or wanted	( )	( )	( )	( )
15. Let me decide things for myself	( )	( )	( )	( )
16. Made me feel I wasn't wanted	( )	( )	( )	( )
17. Could make me feel better when I was upset	( )	( )	( )	( )
18. Did not talk with me very much	( )	( )	( )	( )
19. Tried to make me dependent on her/him	( )	( )	( )	( )
20. Felt I could not look after myself unless she/he was around	( )	( )	( )	( )
21. Gave me as much freedom as I wanted	( )	( )	( )	( )
22. Let me go out as often as I wanted	( )	( )	( )	( )
23. Was overprotective of me	( )	( )	( )	( )
24. Did not praise me	( )	( )	( )	( )
25. Let me dress in any way I pleased	( )	( )	( )	( )

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