UC Berkeley
Theses

Title
Adult Offspring of Manic-depressive and Schizophrenic Parents: The Experience of Being "At Risk" for Familial Mental Illness

Permalink
https://escholarship.org/uc/item/7sc2v310

Author
Kelley, Judith R

Publication Date
1988-04-01

Copyright Information
This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, availalbe at https://creativecommons.org/licenses/by-nc-nd/4.0/

eScholarship.org Powered by the California Digital Library
University of California

Adult Offspring of Manic-depressive and Schizophrenic Parents: The Experience of Being "At Risk" for Familial Mental Illness

By

Judith Robinson Kelley

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

HEALTH AND MEDICAL SCIENCES

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, BERKELEY

Approved: Charles A. Corea 6/2/88
Chairman Date

William M. Ransyon 6/6/88

S D P Segal 6/7/88

Judith R Kelley 6/7/88

ADULT OFFSPRING OF MANIC-DEPRESSIVE AND SCHIZOPHRENIC PARENTS: THE EXPERIENCE OF BEING 'AT RISK' FOR FAMILIAL MENTAL ILLNESS

INTRODUCTION

Manic-depression and schizophrenia are two major illnesses that can result in a lifetime of psychiatric disability, periodic hospitalizations, poor social adjustment and disrupted family relationships. The costs to society are substantial as approximately one to two people out of every 100 in the United States will be afflicted with manic-depression (Klerman, 1988) and one out of every 100 people will be afflicted with schizophrenia (Tsuang et al, 1988). Manic-depression (now more frequently known as bipolar disorder) is typically an episodic disorder of mood in which both mania and depression can alternately occur. Mania is characterized by intense and unrealistic feelings of excitement and euphoria, while depression involves feelings of extraordinary sadness and dejection. Psychotic symptoms of a perceptual and cognitive nature (i.e. delusions and hallucinations) can occur in manic-depression but are congruent with and secondary to the more primary mood dysfunction (Coleman et al, 1984).

Schizophrenia is typically a chronic psychotic disorder characterized by gross distortions of reality, withdrawal from social interaction, and disorganization and fragmentation of perception, thought and mood. The bizarre behavior, thinking and speech of schizophrenia typify what the lay public see as "madness", and people suffering from schizophrenia are generally less functional than those with manic-depression (Coleman et al, 1984). These two illnesses, though dissimilar in many respects, are alike in that

the age of disease onset can be well into adulthood; there is variability in the severity and course of these illnesses, and, more recently, some control of symptoms can be gained with medications and therapy. These characteristics allow for many affected by these illnesses to at least begin, if not maintain, a family by marrying and having children.

The study of children with a manic-depressive or schizophrenic parent has been an area of intense research activity due to the long held observation that both manic-depression and schizophrenia tend to run in families. Studies reveal that these offspring are indeed at increased risk for their parent's illness though the mechanisms behind this increased risk have not been worked out (Beardslee et al, 1983; Reider, 1973). Genetic theories of etiology have dominated the biological field, but family, twin and adoption studies suggest that while heredity definitely plays a role in the development of schizophrenia and manic-depression, it is not the only factor. Earlier theorists have implicated family environmental conditions of parental characteristics, family interaction and communication difficulties as causes of psychoses, though these focused more specifically on schizophrenia rather than manic-depression. Studies testing these hypotheses have shown varied results and the validity of these and other numerous environmental etiologic theories remain controversial.

Research concerning the effects on a family of a psychotic member has for the most part investigated the family as a unit, or the primary caretaker, usually a parent or spouse (Kreisman and Joy, 1974). The studies of effects on offspring of a mentally ill parent remain for the most part oriented toward their 'high risk' status and identification of cognitive, behavioral and personality markers that indicate future overt psychopathology. This ignores the more subtle effects on children of a household disrupted by a psychotic parent. The

spectre of familial mental illness may also loom as a consequence of having a manic-depressive or schizophrenic parent. This may become a particular concern as these offspring enter adulthood, the time period in which these illnesses are most likely to develop.

To explore this area of the effects on offspring of a mentally ill parent, this study addresses the following research questions:

1. Do adult offspring of manic-depressive or schizophrenic parents perceive themselves or their children to be at risk for their parent's illness?
2. Is the perception of risk for familial mental illness linked in meaningful ways to the experience individuals have with their family and a parent's illness?
3. How do adult offspring of manic-depressive or schizophrenic parents cope with a perception of risk for familial mental illness?

These are two populations singled out by the health care community for particular attention and screening, and yet little is known of their perspective on their parent's illness or on this issue of being 'at risk' for familial mental illness. Individuals with a manic-depressive or schizophrenic parent will probably vary markedly in their experience and perceptions of risk. Major differences between offspring with a manic-depressive parent and offspring with a schizophrenic parent may be a result of differentiating effects of these two illnesses, but there will likely be commonalities of concern which cut across these individual differences. Understanding the concerns of children of parents who have been diagnosed as mentally ill, could enable a health care provider to anticipate anxieties that may develop, and appropriately address them as the need arises. A greater understanding of people with this unusual life experience then, could be of benefit to both offspring of parents with familial mental illness and to health care providers wishing to better serve this particular group of 'at risk' individuals.

LITERATURE REVIEW

Mental Illness: Effects on Families

A pioneering study on the effects of mental illness in the family by a group of researchers from the National Institute of Mental Health was published in 1955 in a special edition of The Journal of Social Issues. This issue, entitled "The Impact of Mental Illness on the Family", was edited by John A. Clausen and Marian R. Yarrow. This publication reported on the longitudinal study of thirty-three wives of men hospitalized with a first psychotic or psychoneurotic episode. Major objectives of this research were to outline the process whereby families adapt to mental illness and to distinguish variables in personality, culture, or in the social situations which significantly influence this process. To accomplish these objectives, investigators conducted a series of in-depth interviews with these women when their husbands were first hospitalized until six months after they were released, or if the husband remained hospitalized, at the end of his first year of hospitalization.

One aspect explored by this study of the effect of a husband's mental illness on his family, was the process by which a wife initially perceives and reacts to the behavior of a husband who will later be labeled mentally ill. The researchers portrayed phases the wife went through in defining her husband's behavior, with its shifting interpretations, the occasional outright denial and stable conclusion once a threshold for tolerance had been reached. Yarrow et al (1955a) concluded:

> The findings on the perceptions of mental illness by the wives of patients are in line with the general findings in studies in perception. Behavior which is unfamiliar and incongruent and unlikely in terms of current expectations and needs will not be readily recognized, and stressful or threatening stimuli will tend to be misperceived or

perceived with difficulty or delay. (p. 23)

Through the perceptions of the wives of psychiatric patients another aspect studied by these investigators was the social meaning of mental illness to the family. Influencing a wife's reaction to her mentally ill husband, and subsequent communication with others, were predominant expectations that mental illness is regarded by others as a stigma. It was found that families behaved as if they were minority group members and characteristically showed feelings of underprivilege, marginality, hypersensitivity and self-hatred. (Yarrow et al, 1955b)

In 1965 Rogler and Hollingshead published results of a longitudinal study conducted in the traditional society of Puerto Rico. This was participant-observation research involving a series of in-depth interviews of twenty low socio-economic status families in which the husband, wife or both were schizophrenic, and twenty low socio-economic status families in which the the husband and wife were either normal or neurotic. The purposes of the study were to identify the experiences of persons who are non-schizophrenic in comparison with those who afflicted with schizophrenia, to determine the circumstances associated with the onset of the mental illness, and to assess the impact of mental illness on family life.

These investigators found that the impact of schizophrenia on the family depends on the sex of the person afflicted. Specifically, there was a greater disruptive effect on family when a wife was ill with schizophrenia as compared with a schizophrenic husband. The well husband was unwilling or unable to take on parts of the female role, leading to the disintegration of the family system in this traditional society. Most notably, well fathers with schizophrenic wives did not support their children emotionally and socially, and these children

found to be most retarded in school and social behavior.

This finding of the differential effect on children of a psychiatrically ill mother versus an ill father was confirmed by later research in the United States. It was shown that even when chronically mentally ill men do marry and father children, the effects of paternal mental illness upon their children's development and the family system, are much less pronounced than when the wife and mother becomes seriously disturbed. In one study by Kokes et al (1980), it was found that when the mother was the ill parent, her depression, withdrawal, and incongruous affect were related to lower competence in her child. When the father was the ill parent, however, neither severity nor type of psychopathology was consistently related to child competence measures.

The above research findings have resulted in a number of studies focused on comparison of effects on young children of mentally ill mothers versus well mothers, with special attention paid to intervention methods for mothers hospitalized with psychiatric illness during the years when there are infants and preschool aged children at home. In a review of the literature by Cohler and Musick (1983), findings from a series of clinical observational reports of both schizophrenic and depressed mothers and their children show a number of subtle areas in which being cared for by a mentally ill mother does have significant impact for the adjustment of offspring. These problems include "failure in realizing self-other distinctions, in overcoming magical thinking, and in dealing with pervasive feelings of becoming "defective" like the mentally ill parent" (Cohler and Musick, 1983, p. 147). It was noted that there were a number of areas, such as attention and school adjustment, in which the children of depressed mothers appear to be more vulnerable to difficulties than offspring

of either schizophrenic or well mothers. Finally this review pointed out that many reports have failed to examine the large numbers of children with mentally ill parents who do not exhibit psychopathology nor show problems in adjustment. This has led to further study of these "invulnerable" children and to the search for factors in resiliency rather than vulnerability in offspring of mentally ill parents (Anthony and Cohler, 1983).

Family, Twin, and AdoptionStudies

Strategies to develop evidence for genetic factors in manic-depression and schizophrenia include family, twin and adoption studies. Family studies compare the expectancy of a given medical condition developing among relatives of affected persons with the expectancy in the general population. Twin studies are based on observations of monozygotic twins (or identical twins), who are genetically alike and dizygotic twins who are no more genetically alike that ordinary siblings. If a disorder is genetically determined then, one might expect that pairs of monozygotic twins would show significantly higher concordance rate (percentage of twin pairs with the same disorder) than pairs of dizygotic twins. Adoption studies, in an effort to separate out environmental influences, compare psychopathology in adopted children whose biological parents are ill, with that of adopted children with unaffected biological parents. Another strategy in adoption research compares psychopathology in the biological parents and other biological relatives with that of the adoptive parents and relatives of an affected child (Kaplan et al, 1980).

Family studies of manic-depression have shown that the morbid risk for first-degree relatives, such as children of manic-depressive parents, is approximately 10-15% as compared to a general population risk for manic-depression of 1-2% (Fischer, 1980). The risk decreases as the degree of consanguinity decreases (i.e. the morbid risk for second-degree relatives such as grandchildren is approximately 1-4% [Mendlewicz and Sevy, 1986]). In twin studies of manic-depression, concordance rates of 60-80% have been reported for monozygotic twins, while concordance rates for dizygotic twins drop to 10-20% (Nurnberger and Gershon, 1982). The fact that there is less than perfect (100%) concordance for manic-depression among monozygotic twins, indicates that other factors (i.e. environment) play a role in the etiology of manic-depression.

Family and twin studies cannot differentiate between the influences of what is inherited biologically, from what an individual acquires from the sociocultural and familial context in which he or she is raised. Adoption studies, with the separation of offspring from an ill parent, try to control for the effects of familial environment. Adoption studies for manic-depression have found a greater degree of psychopathology, particularly of affective illness, in parents genetically related to manic-depressive index cases, than in parents who adopted and raised these same individuals (Mendlewicz and Rainer, 1977). These results argue for a role for genetic factors in the etiology of manic-depression.

Family studies of schizophrenia have shown that the morbid risk for first-degree relatives such as children of schizophrenic parents is approximately 10% as compared to the general population risk for schizophrenia of 1% (Rosenthal, 1970; Slater and Cowie, 1971). As with manic-depression, familial

risk for schizophrenia decreases as degree of consanguity decreases (i.e. the morbid risk for second-degree relatives such as grandchildren is approximately 2-3%[Rosenthal, 1970; Slater and Cowie, 1971]). In a twin study by Gottesman and Shields (1972) schizophrenia concordance rates for monozygotic twins were 40-50%, while concordance rates for dizygotic twins were much lower at 9-10%. Other twin studies have shown similar results of the concordance rates of identical twins exceeding rates among dizygotic twins (Kringlen, 1968; Fischer et al, 1969). Adoption studies for schizophrenia have shown that adopted offspring of schizophrenic parents have a higher incidence of schizophrenia than do adopted offspring of normal parents (Heston, 1966; Rosenthal et al, 1968). The finding that the offspring of a schizophrenic parent have essentially the same risk for the disorder whether or not they are raised by that parent strongly suggests the operation of genetic factors.

It must be emphasized, that despite the highly suggestive findings of these family, twin and adoption studies that genetic factors are important in the etiology of manic-depression and schizophrenia, the mode of inheritance of the gene or genes involved in the etiology of schizophrenia or manic-depression is not known. The environmental and/or psychodynamic factors contributing to the development of these illnesses are also not as yet completely delineated. It remains then, as has been true in the past, that the mechanisms behind the development of psychiatric illnesses such as manic-depression and schizophrenia are fertile areas for investigation.

Subjective Risk and Risk Perception

Risk involves exposure to danger and is complicated by uncertainty as to

what might happen. Defining risk, however, has been a key problem in much of risk research. There are many functional risk concepts in use, varying in dimensions and quantitation, but for this study, risk will be defined simply as "the probability of a loss" (Brehmer, 1987).

Risk research has most often involved the evaluation of risk by the expert, the manager or the policy-maker for decision-making in industrial and technological situations. These are usually not the individuals 'at risk', and more recent research has attempted to assess this individual; how he or she perceives risk and what factors underlie variations in risk perception. This area of subjective risk is one in which the definition of potential harm is made by those being studied, so that it becomes an assessment of situation which the persons being studied consider 'dangerous' (Hale, 1987). Objective risk is the situation in which an 'expert' imposes the definition of how much harm and of what form is to be considered 'dangerous' (Hale, 1987). The differences between objective and subjective risks in studies of risk assessment are not as clear as the terms suggest since objective risks, as abstract entities, are applicable only to populations and are not necessarily accurate predictors on an individual case basis.

Using a definition of risk as being the probability of a loss, one aspect of how risk is perceived could be a factor of how people perceive the likelihood of events, or probability. Tversky and Kahneman (1973) explored a judgmental heuristic in which a person evaluates the probability of events by "availability", that is, upon the ease with which an event or situation comes to mind. Events or situations that come to mind easily are judged to have a high probability and vice versa. This is a useful way to predict judgements of probability, because one of the reasons why events or situations come to mind easily to mind is that they have had a high frequency in past experiences. Recall is also influenced

by other factors, such as recency and vividness. Thus, events that happened yesterday are easier to remember than those that happened a year ago, and also, the more dramatic and vivid a situation is, the more easily it is recalled.

More specifically in the area of perceived risk a report of one study has described this as a multidimensional or a multiattributed concept whose basic dimensions may be differently weighted by different individuals. In recent studies of industrial or technological activities, five major factors were found to underlie variations of perceived risk among individuals:

1. Potential degree of harm or lethality
2. Controllability through safety and/or rescue measures
3. Number of people simultaneously exposed
4. Familiarity of consequences and effects
5. Degree of voluntariness of exposure (Vlek, 1987; p. 181)

I was unable to locate any studies aimed at uncovering psychological dimensions of risk perception in the area of risk for familial mental illness. A report of a related, but unpublished study, used a questionnaire to assess the perceptions of manic-depressive patients and their spouses regarding the burden of manic-depression and familial risk for this illness. Fifty-three percent of well spouses, compared to only 5% of bipolar patients stated that they would not have married had they known more about the existence of illness in their spouse prior to marriage. Similarly, 47% of well spouses compared to only 5% of bipolar patients stated that they would <u>not</u> have had children had they known more about manic-depression prior to making this decision. It was concluded that the manic-depressive spouse, as compared to the well spouse, minimizes the burden and denies the familial nature of the illness (Nurnberger and

Gershon, 1982).

In this review of the literature it was shown that a mentally ill family member does have an impact on his or her family, and particularly on a child. Children of manic-depressive and schizophrenic parents have been shown, through family and adoption studies, to be at increased risk for developing their parent's illness. To date, however, no study has addressed risk perception for familial mental illness as an effect of being a child of a manic-depressive or schizophrenic parent. As exploratory, descriptive research interviewing adult offspring of manic-depressive and schizophrenic parents, this study attempts to address this area. The studies reviewed here provide a base for questions asked by this study and evaluation of the resulting data.

METHOD

Subjects

Adult participants for this study were recruited by placing a public ad in three local newspapers, The Daily Californian, Express, and The Oakland Tribune (see Appendix A for text of ad). Thirty-one people responded to the ads and twenty-five of these people were interviewed. Of those not interviewed, one was unable to schedule a time for an interview (woman with manic-depressive father), two did not have a psychiatrically ill parent (one with manic-depressive husband, one with schizophrenic sister) and three did not appear for scheduled first interviews (one woman with manic-depressive father, and one woman & one man with manic-depressive mothers).

Of the twenty-five participants interviewed, three were not included in the final study results; one did not appear for a scheduled second appointment and whose data was then incomplete (woman with schizophrenic mother), and two, after some discussion with the interviewer, did not have the specific belief that their parent was either manic-depressive or schizophrenic. As this research intended to look at subjective experiences and understanding of a mentally ill parent and their illness, the belief that a parent was or had been at some point in time affected by manic-depression or schizophrenia was sufficient for a participant to be included in this study. A copy of an oral informed consent statement was given to each participant at the start of the first interview and any questions and concerns about the study were addressed before beginning the interview. Oral, rather than written consent, was obtained in order to protect the anonymity of participants.

This was a self-selected sample and, as such, the twenty-two individuals interviewed for this study probably differ significantly from the larger population

of adult offspring of manic-depressive and schizophrenic parents. As one of the ads most often responded to was in a campus newspaper, it is not surprising that eleven of the twenty-two respondents (50%) were students, with seven of these undergraduate students (32%) and four graduate students (18%). Twenty-one of the twenty-two (95.5%) identified themselves racially as Caucasian, while one person (4.5%) identified herself as Native American. Only five (23%) of the twenty-two participants were male. Subjects' ages ranged from 20 to 44 years old, with an average age of 30.3 years (S.D. 7.2 yrs). Thirteen of the twenty-two participants (59%) were single, seven (32%) were married and two (9%) were divorced. Seven (32%) identified their religion as Christian or some Christian denomination, seven (32%) identified themselves as having no religion and three (14%) identified themselves as Jewish. All participants were of middle- to upper-class backgrounds and with regard to education were at minimum high school graduates with some college or technical courses taken. These are offspring, then, who have done relatively well in life by society's standards.

Motivations for participating in this study varied from person to person, and indeed many people had more than one reason for their participating in the study. Forty-one percent felt that this would be a good opportunity to talk about their experience of their parent's illness, a subject which they have not often been able discuss freely or in full with others, including their family. As one participant put it, "It's always felt helpful for me to talk about it with someone else and this seemed like another opportunity to do that." Forty-one percent wished to get more information by participating, with most interested in getting general information about their parent's illness, while others were more specifically interested in information on this study, its methodology and results. Thirty-six

percent had altruistic motives knowing that it is often difficult to get research subjects, and so that by volunteering they felt that they were helping in particular the researcher and also others who had a mentally ill parent. Eighteen percent felt, in light of their frustrating experiences with their parent, that more research on mental illness was needed, and that by participating they could contribute in a positive way to this effort for more research. The above motivations were equally expressed among the two parental illness groups. The only other major motivation cited, the opportunity to hear of, read of and talk to others in the same position of having a mentally ill parent, was mentioned by only those with a manic-depressive parent and 33% (four of twelve) of this group did so.

Of the twenty-two ill parents, nineteen (86%) had been given formal medical diagnoses at one time or another, and of these nineteen, only one had never been hospitalized, although he had been treated as an outpatient. Twelve of the twenty-two participants (55%) had a parent with manic-depression and of these, nine had a manic-depressive mother and three had a manic-depressive father. Manic-depression has an incidence in women 1.3 to 2 times greater than that in men (Boyd and Weissman, 1982) so that this could be a partial explanation for the predominance of manic-depressive mothers in this sample. Moreover, a greater number of daughters volunteered to participate in this study as compared to sons. This can be accounted for by sociocultural norms that women are more willing to talk about personal and emotional issues than men. It may be that when a mentally ill parent and his or her offspring are of the same sex, i.e. as in a manic-depressive mother and her daughter, there is a greater influence on the offspring and his or her need for expression on the topic of his or her parent. There is no known sex differential in age of disease onset for manic-depression (Loranger and Levine, 1978) that could result in a

differential marriage rate for manic-depressive women versus manic-depressive men.

Of the ten schizophrenic parents, the mother was the ill parent for seven of participants and for three, the ill parent was the father. Schizophrenia is equally common in men and women (American Psychiatric Association, 1987), so there is no clear explanation for the preponderance of ill mothers in this sample. As with the manic-depressive parents, more daughters volunteered to participate and the issue of a same sex parent may be contributing to this group as well. A project which studied the differential effects on the family of having a wife versus a husband as the ill member, found that a schizophrenic wife had a more pervasive and destructive influence on the family organization than a schizophrenic husband (Rogler and Hollingshead, 1965). This also may lead to a greater influence on the needs for expression by offspring of a schizophrenic mother. Another possible explanation for this predominance of schizophrenic mothers lies in a study that reported the incidence of first treatment is highest for men aged 15-24 years and for women the peak appears between 25 and 34 years of age (Loranger, 1984). It is not known whether these figures reflect a difference in the age of onset of schizophrenia for men versus women, a difference in society's tolerance of disturbed behavior, or a difference in treatment between the sexes, but either of the first two explanations may indicate a higher likelihood for a schizophrenic woman to marry and have children than a schizophrenic man.

Interviews

In-depth semi-structured interviews were conducted following an interview guide/outline as found in Appendix B. Although the majority of topics to be

covered were specified in some detail, participants were encouraged by early open-ended questions to tell their story in a manner which suited them. This approach was used because of the sensitive and personal nature of these topics, as well as to determine what experiences and concerns were of primary importance from the participant's perspective. Thus, the order in which topics were covered and the tempo and intensity of the interview were largely controlled by the participant. If, however, particular areas specified by the interview schedule were not discussed spontaneously, the interviewer directly asked for the required information.

Of interest for this research was whether people saw themselves or their children to be at risk, such that those questions were asked directly (unless brought up spontaneously), along with efforts to elicit reasons why a participant felt as he or she did. The experience of these participants with their ill parent, particularly in the context of their family, would seem likely to influence their perception of risk; specific areas focused on during the interview were the history of the parent's illness as experienced and understood by the participant, the characteristics of the ill parent and other family members, and the participant's relationships within the family. Given the extent of the material to be covered, two interviews, one to two hours in length were required for each participant, and with two participants a third interview was necessary. All interviews were recorded in full. Partial transcriptions and notes were taken on all interview tapes.

The interviews were conducted by the researcher, a third-year graduate and medical student in the U.C. Berkeley-U.C. San Francisco Health and Medical Sciences Program. Forty of forty-six total interviews were conducted in the offices of the Department of Health and Medical Sciences on the University of California, Berkeley campus, while the remaining six interviews were conducted

in locations more convenient to participants' needs related to childcare, travel distance or work schedule.

RESULTS AND DISCUSSION

Perception of Risk for Self

When discussing with participants about whether they saw themselves to be at risk for their parent's illness I found that some saw their perceptions changing over time. When talking about the past, comparable figures of 80% of those with a schizophrenic parent and 75% of those with a manic-depressive parent had perceived themselves to be at risk for their parent's illness [see Table 1]. For those who still or had ever perceived themselves to be at risk, there was wide variation in how intensely this threat was felt, as reflected by the responses of these two participants when asked whether they saw themselves to be at risk for their parent's illness:

> Yes, I always see myself as teetering on the border of really falling to pieces. (twenty-three year old woman with a manic-depressive mother)

> I always think there's a possiblity that I might be more susceptible to the problem (schizophrenia). ...but I'm not gearing my life around the fact that this might happen... (twenty-one year old woman with a schizophrenic mother)

Table 1

Participants' Perception of Risk for Self for a Parent's Illness Over Time

Schizophrenic Parent (n=10)				Manic-Depressive Parent (n=12)			
Past		Present		Past		Present	
Yes	No	Yes	No	Yes	No	Yes	No
80%	20%	20%*	80%**	75%	25%	50%*	50%**
		* ave.age=28 **ave.age=31.9				* ave.age=28.7 **ave.age=30.5	

With time however, and in the context of these interviews, which seemed to trigger a reappraisal of those feelings of risk for some, a number of people no longer see themselves to be at risk. This effect was more pronounced among those who have a schizophrenic parent, as at the time of these interviews only 20% still saw themselves to be at risk while 50% of those with a manic-depressive parent continued to see themselves as at risk for manic-depression [see Table 1]. This difference between the two groups may be due in part to a slight age effect. More specifically, those with a schizophrenic parent who presently did not see themselves to be at risk had an average age of 31.9 years, while those with a manic-depressive parent who did presently see themselves to be at risk had an average age of 28.7 years.

Age may be a greater factor in perception of risk for those with a schizophrenic parent as compared to those with a manic-depressive parent. Those participants with a schizophrenic parent who currently did not see themselves to be at risk were on average 3.9 years older than those who continued to see themselves to be at risk for schizophrenia. The difference in average age between the two risk perception groups with a manic-depressive parent was only 1.8 years. Those with a schizophrenic parent whose risk perception had changed over time most commonly cited their increased age as a reason for no longer feeling at risk for their parent's illness. This is consistent with the finding of an average older age for those not currently perceiving a risk for schizophrenia. These participants clearly viewed the time around which they considered to be the age of disease onset for their ill parent as a danger period which they had passed through successfully without signs or symptoms of their parent's illness.

For example, one forty-three year old man whose mother would not go to a

doctor and whose illness he associated with his own birth, had symptomatology so pronounced by age seven that he reported confronting his father saying "Dad, Mom's crazy. Why don't we do something about it?". His father replied that the only thing to do was put her in a mental institution, where she would just get worse and never get out. "Then who would look after you?" his father asked him. He had no answer. It was only after his father died when this participant was in his 30's that he went to a psychiatrist, described his mother's condition and heard for the first time (though with all the usual disclaimers that without seeing his mother no sure diagnosis could be made) that it was likely she could be diagnosed as paranoid schizophrenic. This participant does not see himself to be at risk now, but when asked if he ever had fears of becoming ill like his mother he replied:

> Certainly yes, but I'm now older than she was when it started for her; she was again married late and I was born when she was 30 or 35 I suppose. I'm now past the stage where most people would see schizophrenia, so I'm not so concerned about it, but that was in fact one reason for going to see a psychiatrist in the past. What did she have, and what about me?

Of those three participants with a manic-depressive parent whose perception of risk had changed over time, one thirty-nine year old woman also attributed this change to her having "made it through the 20's", the time in which her own mother had first manifested signs of manic-depression. For her also, though, along with the others in this category there was a recognition of strengths within themselves from a variety of sources that they felt made them less vulnerable to their parent's illness. One twenty-three year old student, whose mother has been regularly hospitalized during her manic periods, responded to a question about whether she saw herself to be like her mother or father by saying:

> I'm half of them each. I know you are interested in whether I see myself at risk, and that's the reason I don't, because I'm half my father and he's so steady and reliable and balanced. Occasionally if I get real stressed out with school and I think, gee, I could have a mental breakdown... but it's something internal I know, that I'm not going to.

One of the two participants with a schizophrenic parent and two of the six with a manic-depressive parent who continue to see themselves to be at risk for their parent's illness, do so primarily because of their belief that these illnesses are for the most part genetic in transmission. Characteristic of the response of those in this group would be that of a twenty-six year old woman whose mother was diagnosed with manic-depression twelve years ago:

> Q: Do you see yourself to be at risk for manic-depression?
> A: Yes, I would have to say so. I think that emotionally I'm well-balanced. I don't think I show any characteristics of being a manic-depressive and when I get upset I don't think 'oh God, I'm manic'... I think I have the normal range of mood swings, of the average person who's mentally healthy. I don't go around thinking that I'm a time bomb, but on the other hand, logically from what I know and what I've read, especially with having or finding the genetic marker for manic-depression, I know that it's hereditary, there's no doubt about that.

The remainder who have continued to see themselves to be at risk (one of two with a schizophrenic parent and four of six with a manic-depressive parent) have felt a strong identification with their ill parent. For some this identification is by seeing in themselves personality traits or qualities that are characteristic of their ill parent. This contributed to their feeling that they are in a much more vulnerable position with regard to developing the same illness as their parent. Others have actually identified symptoms in themselves, or at least tendencies towards those symptoms, that they associate with their parent's illness.

> As far as implications for me... I have the same kind of energy (as my mother); really jagged energy. I get these real highs and lows and I tend to do things very extremely and really carelessly, like I'm

> moving forward so quickly that I get myself in a lot of trouble. I've been in a lot of car accidents. I'm doing so many things at once and I have a tendency to kill myself and really work hard and then just drop off. I really go up and down. (twenty-three year old woman with a manic-depressive mother)

Two women in their twenties with schizophrenic parents have not felt themselves to be at risk for schizophrenia specifically, perhaps more from a lack of information about their parent's illness at this point in time than anything else. One woman whose mother was accidentally killed just one month before these interviews had just heard for the first time from her mother's therapist the week before that her mother's diagnosis had been paranoid schizophrenia. Previously she had thought her mother to have "emotional problems" and depression, and she had in the past seen herself to be at risk for emotional problems, but was now feeling she had worked out those aspects of herself that had put her at risk. With her mother's diagnosis, she has only a little information about the illness and she does not presently see herself to be at risk for schizophrenia. The other woman has not seen or heard from her schizophrenic father for the last ten years and her minimal exposure to him while she was a child has left a great many questions and fears that center around him and his illness. Her concerns however do not include a sense of risk for herself for schizophrenia, though she does see herself as "neurotic" and having difficulties at this time.

The three participants with a manic-depressive parent who never felt themselves to be at risk for their parent's illness justified their beliefs with the fact that they could not find any indication within themselves or their situation that would lead to an illness like their parent's . One woman had been the scapegoat of a family. She had been physically abused by her "well" mother

when she was young, and emotionally abused by her father and sister, both diagnosed with manic-depression. She felt herself to be at risk for depression certainly from the circumstances of her childhood, but could see no possibility within herself of becoming like her father or sister, particularly with regard to the "I am God" complex and overactive rage that she saw as their symptoms in the manic stages. Another participant, a young man, felt his mother's manic-depression was brought about by the stress of a physical illness and the medical and surgical intervention that followed. He could not see that situation arising for himself, and so did not see himself to be at risk.

Perception of Risk For Self and Experience of Parent's Illness

As discussed in the review of subjective risk literature, factors that underlie perceptions of probability or risk include the ease with which an event comes to mind (i.e. recency, vividness and frequency of occurrence in past experiences), the potential degree for harm, the controllability of an event and the familiarity with consequences and effects of a situation. For those with a mentally ill parent, familiarity with the potential for harm for a mental illness, its controllability and its consequences and effects comes about primarily through their experience with a parent's illness in the context of their family, and through whatever information has been sought or received about their parent's illness. To examine what may underlie differences in risk perception between these two parental illness groups, as well as between those who see themselves to be at risk and those who do not, characteristics of: (1.) a parent's illness (2.) a participant's relationship with an ill parent, (3.) a participant's family and (4.) a participant's understanding of a parent's illness, were assessed and compared across these groups.

Risk Perception and Characteristics of a Parent's Illness

One characteristic of a parent's illness, age of disease onset and its relation to a participant's current age, has already been mentioned as a justification for some who no longer see themselves to be at risk. It seems appropriate, then, to consider whether this is a consistent factor across both parental illness groups, particularly for those who do not presently see themselves to be at risk.

Table 2

Number of Participants Older or Younger Than Parent's Age of Illness Onset and Perception of Risk							
Schizophrenic Parent (n=10)				Manic-Depressive Parent (n=12)			
Currently At Risk(n=2)		Currently Not At Risk(n=8)		Currently At Risk(n=6)		Currently Not At Risk(n=6)	
younger	older	younger	older	younger	older	younger	older
1	1	3	5	5	1	3	3

The age of onset for a parent's illness was determined by statements from participants about when they saw their parent's illness as beginning. For some this involved recounting what relatives had told them about when their parent's first symptoms began or when they were first hospitalized. For others it was from their own observations or deductions such that they, or the researcher, could determine at least an age range during which they felt their parent's illness had begun. For example, one woman saw the episode that led to her mother's first hospitalization for schizophrenia as the "peak of the season", where her illness was most obvious. In this woman's eyes, however, her mother's illness had actually started fifteen years earlier, when her mother had a serious depression and though saw a psychiatrist, began from that time on to withdraw from the family.

These ages of onset were then compared with the ages of the participants given as a part of general demographic information. In this group of participants, 60% (six out of ten) of those with a schizophrenic parent were already older than the perceived age of disease onset for their parent, while only 33% (four of twelve) of those with a manic-depressive parent were older than the perceived age of disease onset for their parent. As the average age of the participants in each group was similar, this would indicate that the average age of onset for those parents with manic-depression was somewhat older than the average age of onset for those parents with schizophrenia.

Of those who were older than their parent's age of onset, 83% (five of six) of those with a schizophrenic parent and 75% (three of four) with a manic-depressive parent, do not presently see themselves to be at risk for their parent's illness (see Table 2). In this study then being older than a parent's perceived age of onset was a consistent factor in both groups for seeing oneself as not being at risk for a parent's psychiatric illness.

The severity of a parent's illness may be another characteristic that would be considered in an offspring's perception of risk. Increased severity would indicate a greater potential for harm in a parent's illness, as well as a greater lack of control, both factors implicated in variations of risk perception. With both of these factors operating, then, increased severity of a parent's illness should lead to a greater perception of risk.

Table 3

Average Level of Severity of Parent's Illness and Perception of Risk (scale= 0-7; 0= least severe, 7= most severe)			
Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Level of severity: range= 3-7 mean= 4.8 mode= 5		Level of severity: range= 1-5 mean= 3.7 mode= 4	
Currently At Risk(n=2)	Currently Not At Risk(n=8)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
4	5	3.3	4

In this study severity of a parent's illness was assessed by the interviewer on a scale of 0-7, with seven representing a high degree of impairment of a parent by their illness. Considered in this level of severity were the level of hospitalization, other dysfunctional characteristics of an ill parent, function in principal occupation during and in between acute episodes, plus level of symptomology.

The level of hospitalization was determined by the number of hospitalizations a parent had had for their illness. The following scale was used: no hospitalizations= 0 points; 1-3 hospitalizations= 1 point; 4-12 hospitalizations= 2 points; and > 12 hospitalizations= 3 points. This kind of scale was used because, particularly at the upper end of the scale, exact numbers of hospitalizations could not be determined. For some cases only a range that would fit into the above categories could be figured. The presence of another dysfunctional characteristic in the ill parent, such as alcoholism, physical or emotional abusiveness or a successful suicide, were considered disruptive enough to increase the level of severity by 1 point. On a much more subjective level, though, with the evidence of what participants related, a

parent's ability to function in his or her principal occupation, which was either a job or housework (i.e. if the parent's occupation was principally that of homemaker), was rated on a scale of 0-2 points, with two points representing the poorest level of functioning. Those parents who were able to function in their primary occupation between acute episodes, though not during acute episodes were given 1 point. A parent's level of psychiatric symptoms then was rated as low (=0 points) or high (=1 point), dependent on the presence of psychotic symptoms. Consistent with observations that schizophrenia is a more severe and dysfunctional illness than manic-depression, for this study the average level of severity of participants' schizophrenic parents was 4.8 (range= 3-7) while manic-depressive parents had an average of 3.7 (range= 1-5).

For both groups, those who did not see themselves to be at risk for their parent's illness had parents with a slightly higher rated level of severity of illness (see Table 3). This result would counter a prediction that an experience of greater potential for harm in mental illness and a lack of controllability would contribute to a greater perception of risk. This finding may be a consequence of the scale used here. Possible explanations can also be found among the comments of participants, some of whom found that the more they could differentiate themselves from their ill parent, the less risk they felt for becoming ill themselves. For example one woman, whose father and manic-depressive mother were both alcoholics, found that she lost a lot of her fears of "going crazy" when she saw that she was able to control her own drinking; psychologically it gave her some groundwork of control over other problems for which she knew herself to be at risk.

Perception of Risk and Quality of Relationship With an Ill Parent

The level of contact which a participant has had with an ill parent could also

be a factor in a participant's perception of risk, as the greater the level of contact, the greater the degree of familiarity with the consequences and effects of mental illness, including the potential for harm. Another aspect that could affect risk perception involves people basing their judgements of probability (i.e. risk being defined as a probability of loss) on the ease with which a situation comes to mind, such that events or conditions that come to mind easily are judged to have a high probability. One reason why situations come easily to mind is that they are recent and vivid in our past experience. A high level of contact with a mentally ill parent, then, would predict an increased perception of risk for a parent's illness.

Table 4

Average Level of Contact with Ill Parent and Perception of Risk (scale= 0-7; 0= low level contact, 7= high level contact)			
Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Level of contact: range= 1-7 mean= 4.5 mode= 7		Level of contact: range= 2-7 mean= 5.5 mode= 6	
Currently At Risk(n=2)	Currently Not At Risk(n=8)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
5	4.4	6.3	4.7

For this study, a participant's level of physical contact with an ill parent was determined on a scale of 0-7, with seven indicating the greatest level of contact. Measures of present and past levels of contact were included in this scale. Past level of contact was determined by the number of years a participant had lived with their ill parent. Those who had lived with their ill parent for 1-5 years were given 1 point, 6-12 years, 2 points and 13-20 years 3 points. No one had lived with their ill parent for more than 20 years. Present level of contact was

assessed by whether the participant was living in the same state as the ill parent, and whether the participant had seen or talked to their ill parent in the last week, month or year (for each yes= 1 point). Those whose parents were dead (three with a manic-depressive parent, two by suicide; and two with a schizophrenic parent, one by suicide) on this scale had little to no present contact. In this study those with a schizophrenic parent had a lower average level of contact (=4.5), than those with a manic-depressive parent (= 5.5). This is not the complete picture, however, as a mode of 7 for those with a schizophrenic parent indicates that there were a number of participants (3) who had very high levels of contact with their ill parent. This was offset, however, in the average by three participants who were separated from their schizophrenic parent early on in their lives by divorce, or death of their ill parent.

As expected, in both groups those who currently considered themselves to be at risk for their parent's illness had a greater average level of contact with their parent than those who did not see themselves to be at risk (see Table 4). This effect was more pronounced in the group with a manic-depressive parent, indicating that for this study level of contact is a greater factor in risk perception for those with a manic-depressive parent than for those with a schizophrenic parent.

The quality of a relationship with an ill parent is another factor which may affect a participant's perception of risk. One idea might be that the closer the relationship with an ill parent the greater the potential for seeing the consequences and effects of a mental illness as well as its potential for harm, such that those who are closer to their ill parent will be more likely to see themselves to be at risk. Conversely, a study of "superkids"; competent, creative and talented children of psychotic mothers, found that an important

variable in the prediction of high social competence among these children at high risk is a warm relationship with the ill mother (Kauffman et al, 1979). This kind of supportive and empathic relationship can be thought of as protective, reducing the impact of parental mental illness. In terms of this study then the concept of a 'protective' relationship may predict that the better the relationship with the ill parent, the less a participant would perceive him or herself to be at risk.

Table 5

Quality of Relationship with Ill Parent and Perception of Risk (scale= 1-5; 1= negative relation., 5= positive relation.)			
Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Quality of relation.: range= 1-5 mean= 2.9 mode= 3		Quality of relation.: range= 1-5 mean= 3.3 mode= 3	
Currently At Risk(n=2)	Currently Not At Risk(n=8)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
3	2.9	3.3	3.2

The quality of closeness and warmth in a relationship is difficult to define and in this study it was judged by participant's descriptions of their relationship with their ill parent. The relationship was rated on a scale of 1-5, with five indicating a high level of warmth, affection and communication between a participant and ill parent, and one indicating a very negative and destructive relationship. For those participants whose relationship with their ill parent was virtually non-existent (i.e. because of early separation and lack of contact) a rating of 2 was given, while for the majority who expressed very mixed or neutral feelings about their relationship with their ill parent, a rating of 3 was given.

The average rating for quality of a participant's relationship with an ill parent was slightly higher for those with a manic-depressive parent than for those with a schizophrenic parent (3.3 vs. 2.9). In both groups however the differences in quality of relationship with an ill parent between those who saw themselves to be at risk and those who did not were insignificant (see Table 5). This may be an effect of increased familiarity of the consequences of mental illness cancelling out the 'protective' effect of a warm relationship with an ill parent. It may be, though, that the quality of relationship with an ill parent has no bearing on an offspring's perception of risk.

Perception of Risk and Family Characteristics and Relationships

A pertinent family characteristic relating to perception of risk would be the presence of other family members with the same psychiatric illness as the ill parent. Again this would relate to the high frequency of an event in one's past experience, making it come more easily to mind and having greater familiarity with the consequences and effects of a psychiatric illness. A strong family history of the same psychiatric illness, then, would predict a greater perception of risk for a parent's illness.

Table 6

Number of Participants with a Family History of Same Psychiatric Illness as Parent and Perception of Risk							
Schizophrenic Parent (n=10)				Manic-Depressive Parent (n=12)			
Currently At Risk(n=2)		Currently Not At Risk(n=8)		Currently At Risk(n=6)		Currently Not At Risk(n=6)	
-fam hx	+fam hx	-fam hx	+fam hx	-fam hx	+fam hx	-fam hx	+fam hx
2	0	6	2	5	1	3	3
-fam hx= no 1st/2nd degree relatives with same psychiatric illness as ill parent							
+fam hx= having 1st/2nd degree relatives with same psychiatric illness as ill parent							

The number of participants with first- and second-degree relatives with the same psychiatric illness as their ill parent were compared across parental illness groups as well as with regard to perception of risk. Thirty-three percent (4 of 12) of the participants with a manic-depressive parent had relatives with manic-depression, while 20% (2 of 10) of those with a schizophrenic parent also had relatives with schizophrenia. This differential between the two groups is consistent with studies that show manic-depression has a greater familial tendency than does schizophrenia (Mendlewicz and Sevy, 1986).

Contrary to what might be predicted, those participants with a family history of other relatives with the same psychiatric illness as their parent did not for the most part see themselves to be at risk for their parent's illness (2 of 2 with a schizophrenic parent and 3 of 4 with a manic-depressive parent) (see Table 6). This could be accounted for, again, by the way in which participants differentiated themselves from those in their family who were ill. For example, one woman who did not see herself to be at risk for manic-depression observed that only males were affected in her family, and as she was female saw herself as less likely to be affected. An alternative explanation would be that these participants, with the frightening experience of many psychiatrically ill relatives, are using the ego defense mechanism of denial.

Another family factor that might affect a participant's perception of risk would be that of quality of relationships with others in the family. Again the idea behind this hypothesis would involve a concept of protection from the impact of a mentally ill parent by the presence of a warm and supportive relationship with another family member. Such a concept could be supported by individual

participants. For example one woman who does not see herself to be at risk described her relationship with her sister as close and one in which they could talk about their mother's illness openly. She commented that, "If I had been all by myself, it would have been a lot different because my father is not real communicative and I would've been a lot lonelier". Another woman, who does see herself to be at risk, has felt isolated and different from her family and has not had any support from her siblings or father in her perceptions of her mother as having schizophrenia. This lack of support for her views factors into concerns about her perceptions of reality, which is then the basis for perceiving herself to be at risk for schizophrenia.

Table 7

Quality of Relationship with "Well" Parent and Perception of Risk (scale= 1-5; 1= negative relation., 5= positive relation.)

Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Quality of Relation.: range= 1-4 mean= 2.8 mode= 3		Quality of Relation.: range= 1-5 mean= 3.3 mode= 4	
Currently At Risk(n=2)	Currently Not At Risk(n=8)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
3	2.8	3.3	3.2

Quality of a relationship then, with either a "well" parent or sibling(s) was rated on a scale of 1-5, in a manner identical to the rating of relationships with an ill parent (see p.31). Those participants with a manic-depressive parent had only a slightly more positive relationship with their well parent than those with a schizophrenic parent (3.3 versus 2.8). When looking at perception of risk, however, with both groups there was little difference in quality of relationship with a well parent for those who perceived themselves to be at risk as compared to those who did not (see Table 7). This appears to negate any protective

aspects of a more positive relationship with a well parent in regard to whether adult offspring perceive themselves to be at risk.

Table 8

Quality of Relationship(s) with Siblings and Perception of Risk (scale= 1-5; 1= negative relation., 5= positive relation.)			
Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Quality of Relation.: range= 2-4 mean= 3.0 mode= 3		Quality of Relation.: range= 1-5 mean= 3.6 mode= 3	
Currently At Risk(n=2)	Currently Not At Risk(n=8)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
3	3	3.5	3.2

With regard to quality of relationship(s) with siblings again those with a manic-depressive parent had a somewhat higher quality of relation with their sibling(s) than did those with a schizophrenic parent. For participants with a schizophrenic parent, quality of sibling relations was exactly the same for those who saw themselves as at risk for schizophrenia as compared to those who did not see themselves to be at risk. For participants with a manic-depressive parent those who saw themselves to be at risk for manic-depression had only a slightly higher quality of sibling relations. For both parental illness groups then, quality of relationship(s) with a sibling (or siblings) was not a factor in perception of risk for a parent's illness (see Table 8).

Perception of Risk and Understanding of Parent's Illness

Understanding of a parent's illness is another factor which could affect whether a person sees him or herself to be at risk for that illness. Specifically for this study efforts were made to elicit a participant's beliefs about the etiology

of their parent's illness. These beliefs could be categorized in general terms of whether heredity or environment were felt to be predominantly responsible for a parent's illness. It could be predicted then, since environment could be perceived as more subject to control than are genes, that those with stronger beliefs in genetic influences on the etiology of a parent's illness would be more likely to perceive themselves to be at risk for that illness.

Table 9

Participants' Beliefs on Etiology of Parent's Illness as Predominantly Genetic vs. Environmental (scale=1-5; 1=environmental etiology, 5=genetic etiology)			
Schizophrenic Parent (n=10)		Manic-Depressive Parent (n=12)	
Beliefs: range= 3-5 mean= 3.9 mode= 3		Beliefs: range= 1-5 mean= 3.5 mode= 5	
Currently At Risk(n=2)	Currently NotAtRisk(n=5*)	Currently At Risk(n=6)	Currently Not At Risk(n=6)
4.5	3.6	3.8	3.2
* 3 participants uncertain/don't know			

For each participant these beliefs were rated on a scale of 1-5. Five would represent a strong belief that genes are the mechanism behind a parent's illness, and one would represent a strong belief that environment is the cause of a parent's illness. Many participants believed their parent's illness was caused by an equal interaction of both genetic and environmental factors. These beliefs were rated with a three. Three participants with a schizophrenic parent were not included in this rating as they either did not have a specific understanding or were not certain enough of any mechanisms behind schizophrenia to express them.

For both parental illness groups the average rating of participant's beliefs about etiology were slanted towards heredity as a greater factor than

environment in manic-depression or schizophrenia. Those participants with a schizophrenic parent had a slightly higher average rating of 3.9, as compared to those with a manic-depressive parent, whose average rating was 3.5. But as the mode for participants with a manic-depressive parent was 5 indicates, there were a number of people who believed that heredity was the only factor responsible for manic-depression.

In each group, but particularly those with a schizophrenic parent, those perceiving themselves to be at risk had a rating farther on the genetic side of this etiologic beliefs scale than did those who did not see themselves to be at risk (see Table 9). This would then agree with the prediction that those with predominantly genetic beliefs for the etiology of their parent's illness are more likely to perceive themselves to be at risk for their parent's illness.

Perception of Risk for Children

Participants were asked whether they saw their children to be at risk for schizophrenia or manic-depression dependent on what illness their parent had. This was, however, a highly speculative endeavor for most as only one of the twenty-two participants had any children, though all participants fell within the age range (20-44 years) of the reproductive years. Of course, the fact that this was a small sample and that it was biased towards students may account for this lack of children. Only nine of the twenty-two participants (41%, age range 23-44 yrs) had ever been married, with seven still married and two divorced at the time of the interviews. Three of those currently married and the two divorced participants had a manic-depressive parent. The remaining four married participants had a schizophrenic parent. Eight of these nine married or previously married couples (89%) had not had children, and this is unusually high as compared to 1985 national statistics of white women ever married between the ages of fifteen and forty-four years, as only 21.3% of this national group of women have not ever had children (United States Department of Commerce, 1987).

Three of the participants, two women with a schizophrenic mother and one woman with a manic-depressive mother, are at this time unable to have children for physical reasons. Three other participants plan never to have children. These three have in common a manic-depressive parent, severe physical and emotional abuse as children and alcoholism in either one or both of their parents. With such traumatic childhoods it is not surprising that they hold very poor opinions of parenting and childhood, and as one of these participants put it, "I don't believe in childhood". Concerns about the risk for mental illness in their children did <u>not</u> play a part in their decision not to have children. Of major

concern for these people in deciding not to have children were their beliefs that childhood was a terrible thing and they did not want to inflict that on anyone. Also, fears for themselves of continuing the "cycle of violence", that is, becoming abusers themselves, played a role in their decision not to have children. For one woman, childhood abuse has resulted in several serious physical ailments which require medications that are proven teratogens, and for this reason particularly she plans not to have children.

The one participant with children is married and the daughter of a woman diagnosed as a paranoid schizophrenic. From as far back as she can remember her mother has been "strange", and labelled "crazy" by relatives, neighbors and friends. Although her mother attempted suicide with an overdose of anti-psychotic medication and tranquilizers when this participant was sixteen, she was not told her mother's diagnosis until she was eighteen, out of the house and about to be married. She had two children shortly thereafter, a girl and a boy who are now six and seven years of age. She has felt at one point in the past some concerns about her own risk for schizophrenia, but has much graver concerns for her children:

> ...I'm hoping I don't get it (schizophrenia); if I did, I would probably in all honesty commit suicide because I wouldn't want to put anybody through what I've been through... I wonder more so, what if my kids get it? Especially with all the problems with my children. If I'd known then what I know now, I would have never had children and will not have anymore because of it. I had my tubes tied when I was 20. I just said to myself, 'No way.'. Both of my children are dyslexic, both are hyperactive and both are on Ritalin. There's enough problems already and I'm saying to myself, 'Oh God, why did I ever do this?'.

Concerned as she is, she loves her children and makes every effort to keep her relationship with them warm, open and supportive. She has sought professional help for both herself and her children. She and the children go to

family counseling sessions, and the children are in a special education program to deal with their learning disabilities. She is unable to share her concerns with her husband who is an alcoholic. Her childhood with a schizophrenic mother and alcoholic father has left her with a "high tolerance for chaos", but through therapy, a co-dependency support group and more education, she is working to create and maintain a healthy situation for herself and her children.

The remaining fifteen participants do plan to have children, though those who are older have some concerns about their ability to have children. In each of the parental illness groups 75% (six of eight in each group) do see their children to be at risk for their parent's illness [see Table 10]. Even the majority of those who do not currently see themselves to be at risk, perceive a risk for their children. This reflects the special nature of the population considered for risk here. Children, because of their vulnerability and dependence on adults, are perceived to be "victims" of harm with a parent as the responsible party. A parent, often perceived as accountable for both genes and environment, will bear the greater burden of guilt and grief if his or her child becomes ill or experiences difficulties.

Table 10

Participant's Perception of Risk for their Children for a Parent's Illness

Schizophrenic Parent (n=8*)		Manic-Depressive Parent (n=8*)	
Yes	No	Yes	No
6	2	6	2
*2 unable to have children		*1 unable to have children 3 do not plan to have children	

Those participants with a schizophrenic parent or manic-depressive parent who did not see their children to be at risk, did not see themselves to be at risk

and so typically felt that ..."if I'm o.k., my kids will be o.k. too. I wouldn't expect them to be anymore at risk than anybody else.". The two with a schizophrenic parent were both male and had a mother that was ill, while the only other male in this group had a schizophrenic father and saw at least a "statistical risk" for his children to become schizophrenic. Only one of the two with a manic-depressive mother who did not perceive a risk for their children for manic-depression was male. The other male in the manic-depressive parent group does not plan to have children. Lack of same sex identification with an ill parent may be a factor here for the men in perceiving a risk for their children. Another possibility, however, concerns the psychological distance a man may have from accountability for a child when a woman is ultimately responsible for bearing a child, and is often a child's primary caretaker. Also it has been established from research on attitudes towards risk and risk handling that women are more risk aversive than men (Hovden and Larsson, 1987).

Participants' perceptions of risk for their children for a parent's illness were not sufficient for any to consider not having children. As one participant, whose beliefs about the etiology of her mother's illness were predominantly genetic, said, "It's possible they (my children) could be at risk, but there's nothing you can do about it. ... having children is something I want to do, so I plan on having them..." One woman, however, who saw her father's illness as resulting from primarily environmental stresses, including family difficulties, noted that, "With kids, unless I could provide a really good environment for them, I wouldn't have... them".

Sixty-three percent (five of eight) in each parental illness group commented specifically on the even greater risk they would feel if their partner had a similar family background of psychiatric illness. Three of the four (the two with a

schizophrenic parent and the female of the two with a manic-depressive parent), who did not perceive their children to be at risk for their parent's illness when just considering the contribution of their own family history, were among those ten who commented specifically about concerns if a partner had a similar family history of psychiatric illness. Four of the five with a manic-depressive parent would consider not having children if their partner had a similar family history while only two of the five with a schizophrenic parent would consider not having children in that situation. Of those six who would consider not having children, five were women.

Three of the participants are in a situation where either their husband or significant other does have a family history of mental illness. One woman has her father, brother and two half-brothers all diagnosed with manic-depression. She doesn't perceive herself to be at risk, however, because in part she doesn't see in herself the mood swings and self-destructive behavior they show. Her husband's father is also diagnosed with manic-depression. When asked if she considered her children to be at risk, she responded:

> Yes. That's a BIG problem. That's a big concern because of (my husband's) family. Then again, you don't know how its transmitted. I wouldn't not have children, until I found out how its transmitted. If I did find out, say, that I would maybe have a chance of passing it on, that would be a tough one because its so painful. I mean, I know its so painful watching my mother see my brother go through this.

Coping with Perception of Risk for a Parent's Illness

Coping has been viewed as an adaptive response to a stressful situation (Coleman et al, 1984). For those participants who had ever perceived themselves to be at risk for their parent's illness (eight with a schizophrenic parent and nine with a manic-depressive parent) at least some degree of stress was associated with this perception. Adaptive responses to this stress, however, varied greatly from individual to individual.

All participants with a schizophrenic parent had at one point or another been involved in some form of therapy, while only two-thirds of those with a manic-depressive parent had been involved with professional help. This therapy or professional help included a variety of situations including family counselling that was not necessarily associated with a parent's mental illness. Of those who have ever seen themselves to be at risk for schizophrenia, 50% sought assistance from either a psychiatrist or psychologist with this specific perceived threat being at least a factor in their decision to seek professional help. For those who have ever seen themselves to be at risk for manic-depression, 33% sought professional help to deal with this perceived risk. This can be seen as part of an emotional approach to coping, where efforts are made to deal with the emotional distress by sharing feelings with others.

Along the same lines, some participants were able to talk with friends or family about their feelings of risk, and in a sense "check themselves out" with others. Only 25% of those perceiving themselves to be at risk for schizophrenia and 33% of those perceiving themselves to be at risk for manic-depression reported coping in this way. Two participants, one with a schizophrenic parent

and one with a manic-depressive parent, also had parents and husbands that were alcoholics. They have found co-dependency support groups, such as Al-Anon, helpful for expressing their concerns with others who have had similar experiences.[1]

Other participants from both parental illness groups take a more cognitive approach to their feelings of risk. For some this involved a more fatalistic approach, that is, "if it's going to happen to me, it's going to happen and there's nothing I can do to stop it". This was not an excuse to "wallow in self-pity"; on the contrary, these participants found it a motivation to keep busy and productive with their lives. For them this attitude reflected acknowledgement that they cannot or need not control all situations.

Those participants with a manic-depressive parent, who saw themselves to be at risk for manic-depression predominantly because of their own perceived similarity to their ill parent and his or her symptoms, also cope using cognitive strategies, though with a more problem-oriented approach. These people would tune into those emotions, behaviors or attitudes that made them feel at risk. When such feelings occurred, they would consciously stop and try to manipulate the situation by changing their behavior or environmental conditions. For example, one thirty-four year old man, when he is feeling "manicky" begins to talk in a more snide and "twangy" kind of voice, and to control his problem he worked on the specific symptom of his voice. When asked how he did this, he responded:

---

[1]Alcoholism was a very common problem in participants' families. Fifty percent of those with a schizophrenic parent had either their ill parent or other parent an alcoholic. Forty-two percent of those with a manic-depressive parent had either their ill parent and/or other parent an alcoholic. In the general population of the United States alcoholism affects 5-10% of adults (Vaillant, 1988).

> I'd just put a lock in my head that as soon as I feel my throat tighten up a bit,... a little alarm would go off in my head that, uh oh, my voice must be different and what I would concentrate on doing was slowing down, overenunciating if I have to, and just relaxing. I noticed that's how I could stop that, and it worked too, because I would relax. Later I would realize that maybe I was upset before, so that's what I did.

As "role models" in this strategy, two of these participants' parents have been able to control their illness through therapy or "internal alarm and control" measures without having to take the medication normally prescribed for long-term control of manic-depression.

For some participants who had ever seen themselves to be at risk for schizophrenia, introspection was a means to change an attitude or redefine the problem in more useful terms. For example a woman participant talked about one of her coping mechanisms as being able "to look at what I've done with my life and the decisions I've made, and all that I've been able to do. That's very encouraging when I feel I can't do anything.". Another participant coped with his feeling of risk by spending a lot of time "...introspecting, sort of developing my own philosophy or world view. In some way I think that was a way of alleviating some anxiety or establishing some kind of framework of security. A sort of twist on the Cartesian cogito[2]; because I'm thinking of these things and coming up with theories and models; therefore I won't go crazy. A sort of concept mastery...".

Other participants were of the philosophy that a healthy body makes for a healthy mind. Particularly on the issue of food, one participant with a schizophrenic mother had noticed that her mother gets "weirder" when she has

---

[2]cogito ergosum= I think, therefore I exist. (Renee Descartes)

binged on candy, so that this participant makes an effort to maintain good nutrition. For others with a manic-depressive parent, exercise was a means to cope with feelings of depression.

One woman's eating and sleeping patterns were strongly affected when her father became ill with manic-depression when she was nine years old. Through a sense that she had to take care of him, she would often not go to sleep until he went to sleep. At one point both her father and her mother, who was an alcoholic and hospitalized at one point for schizophrenia, were unable to take care of her and her sister:

> ...there were times when we really didn't have enough to eat, which was real weird, because the money was there, but we couldn't get our hands on it. We ate what we could. Well, I adopted a family down the street, and I'd just show up at dinnertime. I just lived on one meal a day. I don't know how long that went on; my sister did the same thing. She had a Catholic family, I had a Jewish family. They liked us; we made ourselves so cute that we were fed. I know I did that for food.

When talking about her feelings of risk she noted:

> It is scary to me that my father's mother was sick and my father was sick, gee yeah, maybe I could get sick that way. And that is scary, but I think that if I do the things I need to do to take care of myself, there's a lot less risk of it happening. It's no guarantee I guess, but stress seems to be a real big factor to me, that and losing a handle. There seems to be a balance, a mental balance that one can have if one is looking out for oneself and eating right and staying fit. I know for me I have to be careful not to set goals too high for myself. It's not that I think I'm dumb, I know I'm not. It's just that if I try to reach farther than what I can really deal with at a given time, then I will stress out and I will start to eat myself up. Eating myself up really leads to some negative stuff and I really want to avoid that. So I do; I do much better now.

Other Findings

Far beyond the specific interview questions, participants had a great deal to say about their experiences and other consequences of having a mentally ill parent. For some, concerns about these other effects of having grown up with a mentally ill parent or in a dysfunctional family outweighed any fears about becoming manic-depressive or schizophrenic themselves. The following are a few of the experiences and concerns that came up with many (but not all) participants.

Participants with a schizophrenic parent for the most part had the more disrupted childhoods, as all but one had the complicating factors of either alcoholism, physical, sexual and/or emotional abuse, or another psychiatric illness also in the family. The three participants with a schizophrenic father were all separated from their ill parent at a very early stage in their lives (two by divorce, one by suicide). The majority of those who grew up with their schizophrenic mother then specifically reported dealing with the situation by avoiding their ill parent and the home from a very early age:

> Soon I began to understand there was nothing you could do. To be good or to be well-behaved or to be very helpful... you would still hear yelling and screaming and whatever. So then the best thing was you wake up, you put your clothes on and you disappear in the street and come home real late at night. ... I belonged to every group that I could, I did everything at school, I was part of every theatre performance that there was, just non-stop active outside the house, singing in the choir, hockey team; I did everything. Actually, I see now that it was not so much for interest... it was just a way to escape. (thirty-five year old woman with a schizophrenic mother)

> There was a point when I simply stopped treating her as though

> she were well almost all the time. Even when she was passably well, I still would isolate myself from her. ... When I was about 10 or 12 years old, I would come home and lock myself in the bathroom, just so I could be alone and study; the bathroom being the only room in the house with a lock. ... I would do as much as I could to avoid being home or to avoid being in the same room with her. (twenty-two year old man with a schizophrenic mother)

One participant, who talked about this "non-dealing" way of coping with her schizophrenic mother, felt that this avoidance approach had in some ways become a problem, a kind of pattern that she had for dealing with difficult situations that was not always appropriate.

Half of the participants with a manic-depressive parent had some other dysfunctional factor such as alcoholism, physical, emotional and/or sexual abuse or another psychiatric illness ongoing in the family. Again it was very difficult to separate these influences from the experience of their parent's psychiatric illness. Uncertainty, and the tension resulting from that sense of insecurity, seemed to be key features for many who grew up living with a manic-depressive parent:

> When she was manic, it was like walking into a war zone. You didn't know what you were going to find when you walked into the house. ... When I got home from school, I would creep around the house... and try to assess the situation. (twenty-six year old woman with a manic-depressive mother)

> I think having her manic-depressive, left my life very unpredictable and so I never could relax enough... (thirty-four year old man with manic-depressive mother)

> She had different phases; times where she would be manic for days, manic for hours or manic for a couple of months or depressive.

> With what you saw in the morning you tried to prepare for the evening. I was always scared, though,... I didn't know what was going to happen when she walked in the door. ... It was like hanging on a cliff all the time and the slightest breeze would just throw you right over. I felt like that all the time as a child, because I never knew what I was going to find. (thirty-four year old woman with manic-depressive mother)

Feelings of guilt and responsibility

One issue that many participants with either a manic-depressive or schizophrenic parent brought up during interviews were feelings of guilt and responsibility regarding their parent's illness. The following quotes are representative of those who have felt very personally the burden of their parent's illness.

> The fact that my mother was ill and could not mother is a very guilt-ridden trip for a child, because you feel, especially if its mental illness, you feel you're the cause of it. You feel you're exacerbating any problems there; you feel its your fault that mother can't cope with having kids, with the activity in the house, though nothing was ever, ever said along those lines. I think its just a very natural reaction. You feel guilty for what you do... there were times when I was young and I needed a mother and she would be in a depressed state... She would get up out of bed sometimes and get dressed and come out and lay down on the couch. She would stay there all day, and I would go and beg her to get up and beg her to be my mother. I have tremendous guilt through the years for stressing her in that way when she just couldn't do it and I didn't understand. (thirty-nine year old woman with a manic-depressive mother)

> I remember my brother, two years older than me, making me pray with him, hoping that my father would sleep with her (my mother) again. I was six and my brother was eight. We'd go to church every morning, we would walk through a storm, any temperature. We would both go to church at 6 a.m.; we were Catholics... and we'd pray. It was our responsibility somehow, to make our mother better, and make our father be with her somehow. We did everything we could, just trying

to be angel-children... (thirty-five year old woman with schizophrenic mother and alcoholic father)

It was just we always had to like, wear kid gloves; or I can remember the feeling that you always had to be careful or something like that around her. You can't be naughty or anything because she might get sick. (thirty-two year old woman with manic-depressive mother)

I think I've managed to come to terms with it (my father's schizophrenia) about as well as can be expected. I don't know; I guess there's always, there is still lingering...wonder whether I could be doing something for him that would make a difference in his life; that I should be doing and I'm not. Sort of lingering guilt about whether I'm doing enough. In a sense a schizophrenic parent is a continuing kind of emotional liability in terms of having very unclear sets of responsibility of what can be done and what should be done. I've sort of distanced myself from it in different phases in my life, in different ways. For some period I was kind of angry at him for being that way. I didn't write him or do anything. Although on an objective level I knew it was ridiculous for me to be blaming him for that. At the same time I also knew that I felt angry, so I said I'll just give myself a chance to be angry for a while and I won't write him. But that also makes me very sad to think about that, because his life has been so tragic and so sad... He's a very good man and I learned a lot of good things from him despite his illness... (thirty-seven year old man with a schizophrenic father)

Relationships/Communication

Relationships and communication with others were additional issues that emerged as areas of difficulty for participants that were perceived as resulting at least in part from their experience with their parent's mental illness. Some saw this as the consequence of patterns they had set up for themselves to survive as children, that are maladaptive now that they are adults. Others saw it as the lack of adequate role models in a family disrupted by mental illness.

In a large measure it (the baggage of being the son of a schizophrenic mother) has to do with lack of knowledge of what other people are like and what a relationship with somebody else could be like. I had no role models. Life at home was terrible. And for me, I have lived for a long time with someone... with someone I don't relate to well, but we're not throwing anything and nobody is doing anything really terrible, so it must be o.k. ... The baggage also had to do with as a child, not being able to express myself... there was no point talking to the other person because they're crazy. You never learn how to talk out problems and there's a lack of experience dealing with people in a rational way... (forty-three year old man with a schizophrenic mother)

Q: How has your father's mental illness affected you?
A: I think its just been a devastating thing. I'm afraid I'll never be able to work it out with men. I think its just been this sort of single event in my life that I'm going to have to deal with over and over again in my life. ... I was not aware of what was going on and got left and that's what's happened over and over again in my life. I got left by men. (forty-two year old woman whose schizophrenic father committed suicide when she was nine years old)

...I don't think I had a lot of chances to be a child when I was young, because I was always taking care of things or trying to make things better. I was trying to be a little adult real early. That was the way I survived too. But now that I am an adult I need to let go of some of that controlling type of stuff, especially in relationships, and that's really hard for me to do. Feels like I won't make it if I let go and trust somebody. (thirty -seven year old woman with a manic-depressive father)

"Compensation"

Despite some very tragic experiences as children of either a manic-depressive or schizophrenic parent, a number of participants were able to find positive aspects of this experience. As one participant put it, "its worth it to look for the good in the bad".

Well, to be honest with you I think its (the experience of having a schizophrenic mother) probably made me a far more compassionate person. It forced me to seek out a higher level of understanding of things, so for me, in that respect, there are a few good aspects... (twenty-seven year old woman with a schizophrenic mother)

So it (talking about the lessons gained from her mother's accidental death) does bring a sort of positive to all of this... in the end she gave to us in a way that she hadn't been able to do in a long time; by drawing us together. And because of her leaving as she did, I think she's not left, because of our knowledge of her from her death and talking to people that knew her, the things that she couldn't tell us... I see that the timing of her leaving, her death, has catalyzed a lot of things in all of our (family's) lives. (twenty-eight year old woman with a schizophrenic mother)

It was a very powerful experience growing up in my family... a very unusual experience and one that I cherish even with its ups and its downs, because my mother was so special. I so firmly believe that you really have to experience pain to experience joy and I got that lesson early in life. ... That was part of my mother's optimism, to find goodness in the darkness. (thirty-nine year old woman with manic-depressive mother)

And yet the compensations of calamity are made apparent to the understanding also, after long intervals of time. A fever, a mutilation, a cruel disappointment, a loss of wealth, a loss of friends, seems at the moment unpaid loss, and unpayable. But the sure years reveal the deep remedial force that underlies all facts. The death of a dear friend, wife, brother, lover, which seemed nothing but privation, somewhat later assumes the aspect of a guide or genius; for it commomly operates revolutions in our way of life, terminates an epoch of infancy or of youth which was waiting to be closed, breaks up a wonted occupation, or a household, or style of living, and allows the formation of new ones more friendly to the growth of

character. It permits or constrains the formation of new acquaintances and the reception of new influences that prove of the first importance to the next years; and the man or woman who would have remained a sunny garden-flower, with no room for its roots and too much sunshine for its head, by the falling of the walls and the neglect of the gardener is made the banian of the forest, yielding shade and fruit to wide neighborhoods of men. (Ralph Waldo Emerson, 1841)

CONCLUSIONS

Offspring of manic-depressive or schizophrenic parents are confronted, many times at an early age, with a disturbed parent and a psychiatric illness known to run in families. This research, though admittedly with a small, biased sample, shows that the majority of adult offspring with either a manic-depressive parent or schizophrenic parent have at one time or another perceived themselves to be at risk for their parent's illness. Over time, however, a number of these offspring have seen their perception as changing to no sense of risk for their parent's illness. This effect was more pronounced for the offspring of schizophrenic parents, and was justified by the majority by their being older than the age of illness onset for their parent.

Being older than a perceived parent's age of illness onset was a consistent factor for adult offspring in both parental illness groups for not seeing oneself as at risk for a parent's illness. Increased severity of a parent's illness and more than one family member affected with the same psychiatric illness were also unexpectedly associated in both parental illness groups with those who did not see themselves to be at risk for their parent's illness. A factor that was important in perceiving oneself to be at risk for a parent's illness was a greater level of contact with an ill parent, and this effect was more pronounced for those with a manic-depressive parent. Also the belief that a parent's illness was more predominantly genetic in etiology was a factor for those who saw themselves to be at risk for their parent's illness. Quality of family relationships, with an ill parent, 'well' parent, or sibling(s), did not affect an offspring's perception of risk for his or her parent's illness one way or the other.

The majority of those with a schizophrenic or manic-depressive parent perceived their children to be at risk for their parent's psychiatric illness. This

seemed a greater concern than risk for oneself, perhaps because it was fraught with much more uncertainty, responsibility and lack of control. The low birth rate among the two groups studied here, though explainable by characteristics of the sample, indicates the possibility that unconscious fears about the risk for children may be operating. Women in this sample perceived this risk for their children more than men, though none would forego having children when only considering their own family history. With the situation of a partner with a family history of psychiatric illness, a real situation for a few and hypothetical for others, women were more likely than men to consider not having children because of this perceived risk of psychiatric illness.

Findings from this research that would be of interest for further study would include the unexpected response of those offspring having a parent with more severe illness or a stronger family history of psychiatric illness being associated with not perceiving oneself to be at risk. Would this finding be confirmed with a larger sample and more structured questions in this area? If confirmed, what other factors contributing to risk perception (i.e. age) are coming into play with such findings? Are there aspects of denial and defensiveness with this perception of no risk for familial mental illness under these circumstances? Or could there be a phenomenon whereby a "normal" child or individual aware of the aberrent family environment seeks an internal locus of control and differentiation from the "craziness" around him or her?

To pursue also in further research would be the concerns of offspring of manic-depressive and schizophrenic parents regarding risks for psychiatric illness in their own children. With a larger sample and more structured questions would this finding be substantiated for both groups? If so, are these fears being translated into lower birth rates for both groups as compared with a

matched sample of offspring of "normal" parents? In a number of years what impact might this have on the incidence and prevalence of manic-depression and schizophrenia? With the search for biochemical and genetic markers of psychiatric illness progressing (Nadi et al, 1984; Egeland et al, 1987), risk perception and decision-making regarding child-bearing and familial mental illness may in the future become a more pressing issue.

As this was an exploratory study a number of areas were addressed only briefly. Investigation of how offspring of manic-depressive and schizophrenic parents cope with a perception of risk for a parent's illness might be usefully correlated with changes in risk perception for familial mental illness. Ideally, a prospective study of the developmental time course of phases of risk perception and patterns of coping might further illuminate motivations behind and impact of experiences on risk perception for familial mental illness. Research more closely focused on the other concerns brought up by participants in this study would be productive and useful as well, particularly in comparison with current literature on adult children of alcoholics.

On a practical level from this research, it is important that health care workers be aware that offspring of manic-depressive and schizophrenic parents do have concerns about the familial nature of their parent's illness. These concerns about their own and their children's health could be aired with health care providers in the course of routine care if an inquiry were made for an individual's perceptions and needs for information. Mental health care professionals working with manic-depressive and schizophrenic patients should also serve as a resource for the family for information on a parent's illness. A realistic assessment of familial factors in risk of illness may give reassurance to many, and cause for worry to others, but the "facts" and "statistics" about who becomes ill with manic-depression or schizophrenia are

still beset with ambiguity. There needs to be a good understanding of how individuals process such 'risk' information under conditions of uncertainty. Listening, as a therapeutic modality, should never be underestimated by health care providers as part of an appropriate approach to concerns as expressed by those with a manic-depressive or schizophrenic parent.

REFERENCES

American Psychiatric Association. (1987) Diagnostic and Statistical Manual of Mental Disorders (Third Edition- Revised). Washington, D.C.: A.P.A..

Anthony, E. James and Bertram Cohler. (1983) The Invulnerable Child. New York: Guilford Press.

Beardslee, W.R.; Bemporad, J.; Keller, M.B. and G.L. Klerman. (1983) Children of parents with major affective disorder: a review. The American Journal of Psychiatry. 140:825-832.

Boyd, J. H. and M. M. Weissman. (1982) Epidemiology. In Handbook of Affective Disorders, ed. E. S. Paykel. New York: The Guilford Press.

Brehmer, Berndt. (1987) The psychology of risk. In Risk and Decisions, ed. W.T. Singleton and J. Hovden. Chichester: John Wiley & Sons.

Cohler, Bertram J. and Judith S. Musick. (1983) Psychopathology of parenthood: implications for mental health of children. Infant Mental Health Journal. 4(3): 140-164.

Coleman, James C.; Butcher, James N. & Carson, Robert C. (1984) Abnormal Psychology and Modern Life. Glenview, Illinois: Scott, Foresman and Company.

Egeland, Janice A.; Gerhard, Daniela S.; Pauls, David L.; Sussex, James N.; Kidd, Kenneth K.; Allen, Cleona R.; Hostetter, Abram M. and David E. Housman. (1987) Bipolar affective disorders linked to DNA markers on chromosome11. Nature. 325: 783-787.

Emerson, Ralph Waldo. (1841) Compensation. In The Complete Essays and Other Writings of Ralph Waldo Emerson ed. Brooks Atkinson. New York: The Modern Library; 1950.

Fischer, Margit. (1980) Twin studies and dual mating studies in defining mania. In Mania: An Evolving Concept, ed. Belmaker, R.H. and H.M. van Praag. New York: Spectrum Publications.

_____; Harvald, B. A.; and M.A. Hauge. (1969) Danish twin study of schizophrenia. British Journal of Psychiatry. 115: 981-990.

Gottesman, Irving I. and James Shields. (1972) Schizophrenia and Genetics: A Twin Study Vantage Point. New York: Academic Press, Inc.

Hale, A. R. (1987) Subjective risk. In Risk and Decisions, ed. W.T. Singleton and J. Hovden. Chichester: John Wiley & Sons.

Heston, L.L. (1966) Psychiatric disorders in foster home reared children of schizophrenic mothers. British Journal of Psychiatry. 112: 819-825.

Hovden, Jan and Tore J. Larsson. (1987) Risk: culture and concepts. In Risk and Decisions, ed. W.T. Singleton and J. Hovden. Chichester: John Wiley & Sons.

Kaplan, Harold I.; Freedman, Alfred M. and Benjamin J. Sadock. (1980) Comprehensive Textbook of Psychiatry/III, Volume I. Baltimore: Williams & Wilkins.

Kauffman, Carol; Grunebaum, Henry; Cohler, Bertram; and Enid Gamer. (1979) Superkids: competent children of psychotic mothers. American Journal of Psychiatry. 136(11): 1398-1402.

Klerman, Gerald L. (1988) Depression and related disorders of mood (affective disorders). In The New Harvard Guide to Psychiatry ed. Armand M. Nicholi, Jr., M.D.. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Kokes, Ronald F.; Harder, David W.; Fisher, Lawrence; and John S. Strauss. (1980) Child competence and psychiatric risk V. Sex of patient parent and dimensions of psychopathology. The Journal of Nervous and Mental Disease. 168(6): 348-355.

Kreisman, Dolores E. and Virginia D. Joy. (1974) Family response to the mental illness of a relative: a review of the literature. Schizophrenia Bulletin. 10: 34-57.

Kringlen, Einar. (1968) An epidemiological-clinical twin study on schizophrenia. In The Transmission of Schizophrenia. Oxford: Pergamon Press, Ltd.

Loranger, Armand W. (1984) Sex difference in age at onset of schizophrenia.

Archives of General Psychiatry. 41:157-161.

_____ & Peter M. Levine. (1978) Age at onset of bipolar affective illness. Archives of General Psychiatry. 35:1345-1348.

Mendlewicz, Julien and John D. Rainer. (1977) Adoption study supporting genetic transmission in manic-depressive illness. Nature. 268: 327-329.

_____ and S. Sevy. (1986) Genetic and immunological factors in affective disorders and schizophrenia. In Progress in Brain Research, Vol. 65, ed. J.M. van Ree and S. Matthysse. Elsevier Science Publishers B.V. (Biomedical Division).

Nadi, N. Suzan; Nurnberger, John I. and Elliot S. Gershon. (1984) Muscarinic cholinergic receptors on skin fibroblasts in familial affective disorder. The New England Journal of Medicine. 311(4): 225-230.

Nurnberger, J. I. and E.S. Gershon. (1982) Genetics. In Handbook of Affective Disorders, ed. E. S. Paykel. New York: The Guilford Press.

Rieder, Ronald O. (1973) The offspring of schizophrenic parents: a review. The Journal of Nervous and Mental Disease. 157: 179-190.

Rogler, L. and A. Hollingshead. (1965) Trapped: Families and Schizophrenia. New York: John Willey & Sons, Inc.

Rosenthal, David. (1970) Genetic Theory and Abnormal Behavior. New York: McGraw-Hill Book Company.

_____; Wender, Paul H.; Kety, Seymour S.; Schulsinger, Fini; Welner, Joseph; and Lise Ostergaard. (1968) Schizophrenics' offspring reared in adoptive homes. In The Transmission of Schizophrenia. Oxford: Pergamon Press, Ltd.

Slater, E. and V. Cowie. (1971) The Genetics of Mental Disorders. London: Oxford University Press.

Tsuang, Ming T.; Faraone, Stephen V. & Max Day. (1988) Schizophrenic disorders. In The New Harvard Guide to Psychiatry ed. Armand M. Nicholi, Jr., M.D.. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Tversky, Amos and Daniel Kahneman. (1973) Availability: a heuristic for judging frequency and probability. Cognitive Psychology. 5: 207-232.

United States Department of Commerce, Bureau of the Census. (1987) Statistical Abstract of the United States 1987.

Vaillant, George E. (1988) The alcohol-dependent and drug-dependent person. In The New Harvard Guide to Psychiatry ed. Armand M. Nicholi, Jr., M.D.. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Vlek, Charles. (1987) Risk assessment, risk perception and decision making about courses of action involving genetic risk: an overview of concepts and methods. In Genetic Risk, Risk Perception, and Decision Making ed. Evers-Kiebooms, G. et al.. New York: Alan R. Liss, Inc..

Yarrow, M. R.; Clausen, J. A. and P.R. Robbins. (1955b) The social meaning of mental illness. The Journal of Social Issues. 11(4): 33-48.

_____; Schwartz, C.G.; Murphy, H.S. and L.C. Deasy. (1955a) The psychological meaning of mental illness in the family. The Journal of Social Issues. 11(4): 12-24.

APPENDIX A

Public Ad

Participants needed for U.C. Berkeley graduate thesis research on adult children of manic-depressive parents & adult children of schizophrenic parents. Opportunity to express yourself on your experience of mental illness in your family. If interested, please call 643-8671.

APPENDIX B

Interview Guide

I. What motivated you to respond to my ad?

II. What can you tell me about your parent's illness?

III. Experience of parent's illness
- A. History of parent's illness
  1. Describe for me how your parent behaves when he/she is ill (symptomology)
  2. What were the circumstances when your parent was first diagnosed (if diagnosed)?
  3. Has your parent ever been hospitalized for manic-depression or schizophrenia?
  4. What treatment or medication has your parent had, if any? What treatment is she or he currently on?
- B. Experiences and relations with ill parent: (timing of, subject's age, level of contact with parent)
  1. before symptoms and/or without symptoms
  2. with beginning symptoms
  3. with diagnosis
  4. with treatment
  5. ups and downs from then until now
  6. current situation
- C. Family and parent's illness
  1. Other family members with same mental illness?
  2. Other dysfunctional factors ongoing in the family (alcoholism, physical/sexual abuse, other mental illness)
  3. Communication re: parent's illness (within family, with others)
  4. How did "unaffected" parent deal with ill parent? (quality of relationship?)
  5. Experiences and relations with "unaffected" family members ("unaffected" parent, siblings, extended family)

IV. Understanding of manic-depression or schizophrenia

Ask re:
- A. How first learned about manic-depression or schizophrenia/ first heard about in relation to ill parent

B. Understanding of manic-depression or schizophrenia
   1. How does one behave who has manic-depression or schizophrenia?
   2. Who becomes ill with manic-depression or schizophrenia
C. Resources for information about manic-depression or schizophrenia

V. Perception of risk
Ask re:
A. For self (to what extent?why?)
   1. Identification with ill parent/well parent
   2. Reaction to manic-depressive or schizophrenic symptomology in self
   3. Impact on past/current life situation
B. For children (to what extent?why?)
   1. Do you plan to have children?
   2. Spousal (significant other) awareness and concerns
C. Predictive testing (as a future consideration)
   1. Appropriate to develop such a test?
   2. For self? If such a test were available now would you take it?
   3. For children? (prenatal) Would consider aborting a fetus that tested positive?

VI. Coping/adjustment to perceived risk
Ask re:
A. Coping with risk methods?
   1. self-oriented (education on parent's illness, internal checks/reflection, fatalism)
   2. other-oriented (friends/family, self-help groups, therapy/professional help)