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# Psychosocial Outcomes for Adult Children of Parents with Severe Mental Illnesses: Demographic and Clinical History Predictors

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Children of parents with mental illness are at risk of psychiatric and behavioral problems. Few studies have investigated the psychosocial outcomes of these children in adulthood or the parental psychiatric history variables that predict resilience. From a sample of 379 mothers with serious mental illnesses, 157 women who had at least one adult child between the ages of 18 and 30 were interviewed. Mothers reported that about 80 percent of these adult children were working, in school, or in training. However, about one-third had not completed high school, and 54 percent were judged to have a major problem in psychological, drug or alcohol, or legal domains. Although nearly 40 percent were parents of minor children, only about 12 percent were in a committed relationship. Mothers' bipolar diagnosis was a significant predictor for number of adult child problems. The results indicate a need for more attention to the parenting status of adults with mental illnesses and to their parenting concerns and needs.

KEY WORDS: *bipolar disorder; children; mothers with mental illness; parents with mental illness; psychosocial outcomes*

**A**lthough numerous studies have established the at-risk status of children whose parents have a mental illness, few have examined those children in adulthood. The studies that have been conducted are primarily epidemiological, indicating a significantly higher risk of being diagnosed with a mental illness than adults in the general population (Erlenmeyer-Kimling et al., 1995; Erlenmeyer-Kimling et al., 1997; Gershon et al., 1988; Maier et al., 1993; Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997). Only a limited number of studies have examined psychosocial outcomes for adult children of parents with mental illness. In this article, we describe the role functioning of a sample of urban, low-income, and predominantly ethnic minority adult children of mothers with a serious mental illness. We also examine the predictors of adult child functioning, based on child and maternal characteristics and on mothers' clinical histories, including diagnosis.

## **PSYCHOSOCIAL OUTCOMES OF ADULT CHILDREN OF MENTALLY ILL PARENTS**

A recent review of relevant literature (1990 through 2001) identified 16 studies on the psychosocial

outcomes of adult children of parents with mental illnesses. Six examined clinical outcomes; three qualitative studies (with sample sizes from four to 10) presented respondents' experiences growing up with a mentally ill parent. Seven more comprehensive, quantitative studies had sample sizes ranging from 29 to 286, and included several population-based surveys of mental illness in parents. In these quantitative studies, investigators reported that compared with controls adult offspring had elevated work and marriage problems and lower overall functioning (Weissman et al., 1997), more social avoidance and lower self-esteem (Williams & Corrigan, 1992), poor social adjustment (Jacob & Windle, 2000), and increased levels of drinking alcohol (Neff, 1994). Similarly, in qualitative studies, participants with mentally ill parents reported multiple problems, including childhood abuse and neglect, isolation, and guilt (Dunn, 1993); hatred of mother and self, poor parenting, isolation, excessive caregiving to the mentally ill parent, stigma, and lack of support from others (Williams, 1998). Besides being affected by parenting problems, adolescent children taking care of a mentally ill parent may be less likely to establish their own vocational or educational goals

or be in committed relationships as a result of social isolation (Stromwall & Robinson, 1998). Only one study reported on participants' coping methods (escape or isolation, support from others, acquiring information, and spirituality and internalizing) and strengths (self-reliance, empathy, resilience, assertiveness) (Kinsella, Anderson, & Anderson, 1996).

Research samples for these studies have been quite diverse. Several involved parents with depression (Daley, Hammen, & Rao, 2000; Dyer & Giles, 1994; Jacob & Windle, 2000; Weissman et al., 1997) or mixed diagnoses, such as schizophrenia and affective disorders (Solomon & Draine (1995) and depression and anxiety disorder (Andrews, Brown, & Creasey, 1990). Still others included parents labeled mentally ill by their adult children (Landerman, George, & Blazer, 1991; Neff, 1994; Williams & Corrigan, 1992). Few studies examined adult child psychosocial outcomes in relationship to characteristics of the parent's mental illness. For those that did, the variables examined included chronicity (Andrews et al.) and social adjustment (Dyer & Giles). None of the studies examined whether parental diagnosis had a differential effect on the psychosocial outcomes of adult children.

Inattention to the differential effects of parental diagnosis on adult child psychosocial outcomes is a significant omission for many reasons. In a review of the literature on parenting with mental illness Oyserman and colleagues (2000) reported that depressed mothers of infants and children were less responsive, less attached, more negative, more critical, more anxious, disorganized, inconsistent, and ineffective than mothers without depression. Having a mother with schizophrenia, by contrast, seems to primarily affect the child's cognitive development and behavior problems. Parenting of mothers with a bipolar diagnosis has rarely been studied; the few research results reported indicate that the problems of these mothers are similar to those with major depression.

Lack of attention to demographic variables is another limitation of the research on psychosocial outcomes of adult children of parents with mental illness. In fact, the only demographic variable examined in these studies was child gender, with inconsistent results: significant negative effects of parental mental illness for females only (Neff, 1994); no gender differences (Jacob & Windle, 2000; Weissman, Warner, Wickramaratne, Moreau, &

Olfson, 2000); or positive effects (adaptive coping) on female (not male) relatives (Solomon & Draine, 1995). Examination of race and ethnicity differences has been rare and inconclusive, and studies to date seldom have used controls for age of the adult child. Failure to consider demographic characteristics may affect the interpretation of study results. For example, some studies suggest exacerbation of negative effects of maternal mental illness on daughters compared with sons, arguing that this is due to gender identity issues (Oyserman et al., 2000). The literature on behavior problems, however, consistently affirms that boys have more problems than girls, and that older adults have fewer problems than young adults (see Mowbray, Lewandowski, Bybee, & Oyserman, 2004, for a review). Thus, some maternal characteristics such as her age are confounded with adult child characteristics (such as age). Due to this confound, main effects of maternal characteristics on adult child outcomes may be meaningless. Variations in race and ethnicity and socioeconomic status (SES) are important to include in research; in our review of research on parents with mental illness, the race of participants was nearly always white, and their SES nearly always middle class or higher, severely limiting generalizability of findings (Oyserman et al., 2000).

The present study involves mothers with a serious mental illness reporting on the status of their adult children—positive as well as problematic outcomes. We examined gender, race and ethnicity, and age differences in the sample of adult children, and used these demographic characteristics as controls in subsequent multivariate analyses predicting outcomes. From the literature reviewed, this study appears unique in contrasting adult child outcomes across mothers' diagnoses (major depression, bipolar disorder, and schizophrenia/schizoaffective disorders), as well as in relating outcomes to maternal clinical characteristics (age of onset, duration of mental illness, hospitalization history, and separations during childhood) and demographics (marital status, education, number of children in the family).

## **METHOD**

### **Participants**

Women ages 18 to 55 years, who had care responsibilities for at least one minor child, were recruited from 15 community mental health and inpatient psychiatric units in southeast Michigan ( $N = 379$ ).

All participants fit criteria for serious mental illness (duration greater than one year; diagnoses of schizophrenia, major affective disorder, or bipolar disorder; exhibiting major dysfunction in one or more life areas). The women were participants in a National Institute of Mental Health–funded, longitudinal study of motherhood and mental illness and were interviewed at three time points over a five-year period from 1996–2000, with an 87 percent retention rate. Interviewers were all women with backgrounds in human services, who were provided five days of training (including administration of the *Diagnostic Interview Schedule* [DIS]; Robins, Helzer, Croughan, & Ratcliff, 1981) and ongoing supervision by an interview coordinator.

Following the wave 3 interview, women with at least one adult child ( $N = 223$ ) were contacted about participating in a phone interview; 163 women consented. We eliminated mothers whose children were deceased or were older than age 30 to minimize heterogeneity. In addition, we eliminated mothers who had no information about their adult children. The process resulted in the loss of six cases. The remaining 157 women had an average age of 44.6 years ( $SD = 5.4$ , range 34.7–61.0). The total number of adult children was 346, ranging from one to nine per family, with a median of two. The mothers in the sample were distributed as follows: 59.2 percent African American, 28.7 percent white, 7.5 percent Latina, and 4.4 percent other races and ethnicities. The median educational level was GED or high school graduation (21 percent); 35.7 percent had less than a high school education and 43.3 percent had at least some college. Mothers' DIS–based diagnoses were 51.9 percent major depression, 22.3 percent bipolar disorder, and 18.4 percent schizophrenia/schizoaffective. The remaining women's diagnoses could not be ascertained. Their median lifetime number of psychiatric hospitalizations was two, and ranged from zero to 47. One-fifth of the sample (20.4 percent) was married; 47.7 percent were separated, divorced, or widowed, and 31.8 percent were single/never married. Their household income put them just above the 1996 poverty level ( $M = 1.07$  percent of poverty line, range 0–3.7 percent,  $SD = 0.65$ ). There were no significant differences between those eligible for the study (that is, having adult children) and the rest of the sample on education, race, marital status, number of children, or adjusted household income.

## Procedures

Eligible women who consented to participate were scheduled for brief (10–15 minute) phone interviews, for which they were compensated \$20. The phone interview data concerned only one adult child (ages 18 to 30) per mother. If mothers had more than one adult child, the target child was randomly selected.

**Measures on Adult Children.** Mothers were asked the following about their adult children: Frequency of contact (1 = few times a year to 4 = daily); satisfaction with mother–child relationship (1 = not at all to 5 = completely); whether she had knowledge of child's life (yes/no); child's satisfaction with life (1 = not at all satisfied to 5 = completely satisfied); age the child moved out of mother's house; city of residence; highest education level (less than HS, HS/GED, or more than HS); what he or she is doing now (for example, working full-time or part-time, postsecondary school attendance, or enrolled in occupational training); whether the adult child was married or in a relationship; and whether the child had any children, and if so, how many. Mothers were then asked a series of yes/no questions about whether the adult child had drug problems, alcohol problems, police or legal problems, psychological problems, or other problems.

Most mothers were willing to participate in the interview (as noted earlier). Although in part, this was likely due to receiving compensation, we believe it is also because of the positive relationship that had been established with research project staff over several years. Because of this relationship, and based on other evidence of the validity of mothers' reports of the behavior and problems of their younger children, we felt confident that mothers would accurately report on their adult children's status. For example, in other articles, we established that mothers' ratings of child behavior problems predicted child service use (Mowbray, Lewandowski et al., 2004); also, we have examined correlations between pairs of variables reflecting mothers' subjective assessments compared with more objective measures of the same construct, such as police statistics on neighborhood crime rate versus mothers' physical environment ratings, and found significant correlations (Mowbray, Oyserman, Bybee, Callahan, & MacFarlane, 2004).

**Predictor Variables from the Mothers' Database.** These included age, race, total number of children, highest year of education, and marital status. At

wave 1, maternal substance abuse history was assessed with Skinner's (1982) Drug Abuse Screening Test (DAST), a 19-item checklist with a standard cutoff score of five suggestive of a history of drug or alcohol abuse; higher scores indicate more problematic substance abuse histories. In our sample, the mean score was 5.12 ( $SD = 4.8$ ;  $\alpha = 0.94$ ). Psychiatric history variables included age at mental illness onset (that is, age at first psychiatric hospitalization, or, if none, age at first psychiatric visit or worst symptoms), duration, and history of hospitalizations (average number per year since mental illness onset, to reduce confounding with illness duration). A life history calendar was used in wave 3 to obtain this information from mothers, as well as number and dates of separations from their children.

### ANALYSIS PLAN

Descriptive data are presented on the demographics and psychosocial outcomes of the adult children. We used multiple regression analyses to determine whether maternal demographics, maternal mental health history, and mother-child separations were predictive of the child's problems in adulthood. Analyses were hierarchical, entering variables in four ordered blocks: (1) controls for adult child demographics (that is, age, race, and gender), (2) maternal demographics (that is, age and education), (3) maternal mental health history (that is, diagnosis and substance abuse history), and (4) mother-child separations before the age of 12. This order allowed us to test the contribution of mother-child separations, controlling for demographics and maternal mental health history; the contribution of maternal mental health variables, controlling for demographics of mother and child; and the effect of maternal demographics, controlling for child demographics.

The dependent variable—number of life domains in which the adult child had problems—was a count that could take on only positive values, is usually positively skewed, and often violates the ordinary least squares regression assumption of constant variance. Thus, we used Poisson regression (Gardner, Mulvey, & Shaw, 1995). Empirical testing showed no evidence of overdispersion, indicating an optimal fit to the observed data. In Poisson regression, predictor effects are expressed as linear functions on the log of the dependent variable; interpretation of results typically involves ex-

amination of the multiplicative effects of the exponentiated coefficients; that is,  $\exp(B)$  (Long, 1997).

### RESULTS

Adult child age at time of interview ranged from 18 to 29, averaging about 22 years; 82 (52 percent) were male, 75 (48 percent) female (Table 1). Race and ethnicity of adult children were the same as that of their mothers. More than 95 percent of the mothers reported having knowledge of their adult children's lives; three-quarters reported being somewhat, very, or completely satisfied with their relationship with their adult child. In terms of reported frequency of contact with adult children, the mothers' modal response (by more than half) was daily. In fact, about 20 percent of the adult children still lived with their mothers. Those who had moved out did so shortly before their 18th birthday, on average. Mothers reported that the majority of adult children lived in the same city as they did, with fewer than 15 percent living outside Michigan. Five (3.2 percent) were in correctional facilities. Only about 12 percent of the adult children were married or in a committed relationship, according to mothers, but nearly 40 percent had children ( $M = 1.7$ , range 1 to 5 children, with the largest percentage of children aged 0 to 3 years).

About 31 percent of the adult children did not have a high school diploma or GED, although another 31 percent had at least some college. Reportedly, 80 percent of the adult children were either working (65 percent), in school (32 percent), or in training programs (11 percent).

### Specific Problems Identified

Mothers were asked whether the adult child had experienced problems in any of four specific areas. On average, the mean number of problem areas reportedly experienced by adult children was 1.12, but the distribution was skewed, with about 54 percent having at least one problem area. The most frequently listed adult child problems were psychological (about 40 percent). Nearly half of these involved depression, and about another 8 percent involved bipolar disorder. Many mothers also mentioned attention deficit hyperactivity disorder (ADHD) or learning disabilities (about 20 percent). Other psychological problems were listed infrequently. Police and legal problems were reported for about one-third of the sample; relatively few

**Table 1: Descriptive Data on Adult Children of Mothers with Serious Mental Illness**

Variable	Descriptive Statistics			
	<i>M</i>	<i>SD</i>	%	<i>n</i>
Child's age <sup>a</sup>	22.28	3.04		
Age child moved out	17.73	4.31		
Child's satisfaction with life <sup>b</sup>	3.17	1.10		
Frequency of contact with mother	3.32	.86		
Mother's satisfaction with relationship <sup>c</sup>	3.60	1.16		
Total number of child problem areas	1.12	1.18		
Child problem areas				
Problems with drug use			11.6	18
Problems with alcohol use			7.7	11
Legal problems			32.3	50
Psychological problems			40.3	62
Any of the above problem areas			53.9	83
Child education level				
Less than high school			31.1	47
Completed high school/ GED			37.7	57
More than high school			31.1	47
Child currently in work/school/training program (% yes)			79.9	123
Relationship Married/in a committed relationship (% yes)			11.5	18
Child as parent % with children			37.7	57
Location of child residence				
Lives with mother			20.8	30
Same city as mother			37.7	58
Same tricounty area as mother			14.9	23
Same state as mother			11.0	17
Different state than mother			10.4	16
Different country than mother			1.9	3
Correctional facility			3.2	5

<sup>a</sup>At time of phone interview, calculated from interview date and adult child's birth date.

<sup>b</sup>Scale: 1 = not satisfied at all, 5 = completely satisfied.

reportedly had drug problems (12 percent) and even fewer had alcohol problems (8 percent).

### Race, Gender, and Age Differences

Significant race differences were found for psychological problems (white children 63.6 percent compared with black children 30.1 percent) [ $\chi^2(1, N = 137) = 13.89, p < .001$ ] and for total number of problem areas (white children,  $M = 1.68, SD = 1.20$ ; black children,  $M = 0.91, SD = 1.12$ ) [ $t(136) = 3.67, p < .001$ ]. Those with psychological problems were significantly younger than those without (problems,  $M = 21.26$  years,  $SD = 2.36$ ; no problems,  $M = 23.07$  years,  $SD = 3.23$ ) [ $t(152) = 3.78, p < .001$ ]; as were those with alcohol or drug problems (problems,  $M = 21.39$  years,  $SD = 2.12$ ;

no problems,  $M = 22.48$  years,  $SD = 3.17$ ) [ $t(50.26) = -2.17, p < .04$ ]. Age also significantly correlated with number of problem areas [ $r = -.25, p < .01$ ]. Significantly more male than female children had legal (52 percent compared with 11 percent) [ $\chi^2(1, N = 154) = 29.81, p < .001$ ], drug (20 percent compared with 3 percent) [ $\chi^2(1, N = 154) = 10.95, p < .001$ ], and psychological problems (51 percent compared with 28 percent) [ $\chi^2(1, N = 154) = 8.36, p < .01$ ], and more total problem areas ( $M = 1.51, SD = 1.19$ ;  $M = 0.70, SD = 1.03$ ), [ $t(152) = 4.50, p < .001$ ], and were reportedly less satisfied with their lives ( $M = 2.99, SD = 1.17$  compared with  $M = 3.38, SD = 0.99$ ) [ $t(154) = -2.24, p < .03$ ].

Results indicated that adult children with a problem in one domain were significantly more likely

to have problems in other domains. Because the outcome variables were so interrelated, we chose one—total number of problem areas—as the dependent variable in the regression analysis.

### Predictors of Adult Child Outcomes

Results of the Poisson regression are in Table 2. Likelihood ratio (LR) chi squares for each block indicate that adult child demographics, maternal demographics (at a trend level of  $p < .10$ ), and maternal mental health history blocks made significant successive contributions to explaining variability in the count of adult problems; mother-child separations made no additional contribution to the model once contributions from previous blocks were controlled.

In block 1 (adult child demographics), older adult children were reported to have problems in fewer life domains, and for each additional year of age, there was a 7 percent reduction in number of problems ( $1-B = .07$ ). Male adult children had problems in more domains (1.72 times more than females). In block 2 (maternal demographics), children of mothers with less education were reported to have fewer problems, specifically, mothers who had not finished high school reported adult child

problems in only two-thirds as many domains as mothers who had higher levels of education. In block 3 (maternal mental health), both maternal diagnosis and maternal substance abuse history were related to adult child problems. The exponentiated coefficients for schizophrenia/schizoaffective disorder and major depression diagnoses were both below one, implying that, in comparison, mothers with bipolar disorder reported that their adult children had problems in more domains. Maternal substance abuse history was positively related ( $p < .10$ ) to adult child problems; each additional item endorsed on the 19-item DAST was associated with a 3 percent increase in the total number of problems. Controlling for these effects, separations from mother during childhood made no additional contribution to the number of adult problem areas reported.

## DISCUSSION

### Limitations

Limitations of the current study should be acknowledged. Mothers were recruited from the public mental health system in a Midwestern urban area. They all had care responsibilities for at least one of their children; mothers who had lost contact with

**Table 2: Poisson Regression Predicting Number of Domains in which the Adult Child Has Problems**

	<i>B</i>	<i>SE</i>	<i>Exp(B)</i>	<b>Block <i>df</i></b>	<b>Block LR <math>\chi^2</math></b>
Block 1—Adult child demographics				3.00	31.58***
Age of adult child	-0.07*	0.03	0.93		
Race of adult child (1 = African American)	-0.19	0.16	0.82		
Gender of adult child (1 = male)	0.54**	0.18	1.72		
Block 2—Maternal demographics				2.00	5.45 <sup>†</sup>
Maternal age	0.01	0.02	1.01		
Maternal education (1 = less than high school)	-0.39*	0.20	0.68		
Block 3—Maternal mental health history				3.00	10.19*
Maternal diagnosis					
Schizophrenia/schizoaffective	-0.54*	0.27	0.59		
Major depression	-0.37*	0.17	0.69		
Bipolar (comparison category)					
Extent of maternal substance abuse history	0.03 <sup>†</sup>	0.02	1.03		
Block 4—Maternal-child separations				1.00	0.39
Maternal separations before adult child age 12	-0.02	0.40	0.98		
Intercept	1.36	0.89			

Note: Block LR chi-square tests assess the significance of the sequential addition of each block of predictors, controlling for those in previous blocks. Coefficients are from the final model, following addition of block 4.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

all their children were not in the study. Thus, the sample may not be representative of the adult children of all women with mental illness.

The fact that only mothers' reports were used may constitute another limitation. However, most mothers were in frequent contact with their children and may not have been any more biased reporters than the children, given mothers' significant rapport with the project. Also, based on other data, these mothers had been found to be accurate reporters of child and adolescent behaviors and problems. For example, mothers' reports of externalizing behaviors from the Child Behavior Checklist (Achenbach, 1991) were significantly related to their adolescent child's concurrent grade point average (obtained from school records,  $r = -.37, p < .01$ ) and to teacher reports of adolescent child behavior problems in school ( $r = .40, p < .01$ ). We feel that the value of the study outweighs the limitations because there are few published accounts of psychosocial outcomes of adults whose mothers have serious mental illness (SMI), and among those studies, ours involves a relatively large sample. Our findings substantiate some previous research, but also suggest important new directions.

### **Summary of Outcomes for the Adult Children**

Congruent with other literature, adult children in this study evidenced problematic functioning in several domains. First, about one-third had not completed high school. This is consistent with the few studies that examined academic outcomes for adolescent children of mothers with mental illness—relating parental depression to adolescent school problems (Billings & Moos, 1983; Hammen, Gordon, Burge, Adrian, Jaenicke, & Hiroto, 1987) and lower GPA (Tannenbaum & Forehand, 1994); parental bipolar disorder to adolescents' academic difficulties (Hammen et al.); and parental schizophrenia to adolescent offspring's cognitive difficulties (Arbelle et al., 1997). Second, about one-third of adult children reportedly experienced psychological problems. In other studies, adult children had lower overall functioning (Weissman et al., 1997), more social avoidance and lower self-esteem (Williams & Corrigan, 1992), and poor social adjustment (Jacob & Windle, 2000). Adolescent children of parents with SMI also have higher levels of internalizing and externalizing behavior problems (Thomas, Forehand, & Neighbors, 1995) and more

persistent emotional and behavioral difficulties (Rutter & Quinton, 1987) than children of parents who are not mentally ill. Third, it might be inferred that the adult children in this study had relationship problems, in that, at an average age of 22, only about one in nine was in a committed relationship, although 38 percent were parents. Earlier research has reported that adolescents with parental mental illness have reduced social competence (Thomas et al.).

Our results also show positive outcomes for many of the adult children: More than 40 percent were in postsecondary education or training, and 65 percent were working. Contrary to other reports, relatively few (8 percent to 12 percent) had drug or alcohol problems, and most mothers were satisfied with parent-child relationships. Rather than fleeing the family, more than 70 percent of adult children lived in proximity to their mothers.

### **What Predicts Outcomes for These Adult Children**

We searched for demographic differences related to reported problems for this sample of adult children and found results consistent with general population studies: more psychological problems for younger than older and male than female adults (Kessler et al., 1994); racial differences were significant in our sample, but inconsistent in the literature (U.S. Department of Health and Human Services, 1999). In our study, adult child problems were reported less frequently from mothers who had not finished high school. We speculate that less well-educated mothers may have lower expectations for their children's success and therefore be less likely to see problems in their adult children's lives, particularly those of a psychological nature. Better-educated mothers may be more attuned to identifying psychological or other difficulties and therefore more likely to report adult child problems. The role of mothers' education in relationship to the outcomes of their adult children appears to be worthy of further study. Whatever the interpretation, the results indicate the importance of using demographic variables as controls in predictor analyses.

Perhaps the most significant finding from this study comes from the multivariate regression analyses predicting adult child outcomes. The results provided more definitive information than earlier reports concerning relationship with mothers'

diagnoses. Mothers' bipolar diagnosis was a significant independent predictor of adult child problems, controlling for child age, gender, and race. Other studies have not systematically used controls or examined outcomes across diagnoses, focusing mainly on single diagnoses, primarily depression. However, in a recent meta-analysis, children whose parents have a bipolar disorder were 2.7 times more likely than controls to develop any mental disorder and four times more likely to develop an affective disorder (Lapalme, Hodgins, & LaRoche, 1997). Research has also found that, as adolescents, children of parents with bipolar disorder are at risk of diagnoses of ADHD and depression (Chang, Steiner, & Ketter, 2000) and are more likely to display a personality disorder (Grigoriou-Serbanescu, Christodorescu, Totoescu, & Jipescu, 1991).

In our review of the literature, we were unable to locate studies that compared adult child outcomes across maternal diagnoses of depression, bipolar disorder, and schizophrenia. Our results suggest that mothers' bipolar diagnosis may have a strong negative effect on their children. More research on bipolar disorder and more cross-diagnosis studies are warranted. Furthermore, research is also needed to identify the mechanisms or pathways through which a parental diagnosis of bipolar disorder may have such negative and long-term effects on children. Perhaps having a diagnosis of bipolar disorder reflects parenting that is less consistent and more difficult for children to understand or predict.

### **Implications for Social Work Practice**

These results reiterate findings from other studies demonstrating that some children of mothers with SMI have problems in adulthood. We suggest that a viable way of addressing these problems in childhood is through attention to the parenting of women with such diagnoses. Changing parenting behavior is often an effective means to prevent childhood and later adult disorders. Also, connecting with parents in treatment regarding concerns about their children could be an efficient early intervention method with the children. Research has indicated, however, that mental health practitioners infrequently attend to the parenting needs or concerns of their clients (see for example, DeChillo, Matorin, & Hallahan, 1987). Some appropriate parenting intervention strategies include (Mowbray, Nicholson, & Bellamy, 2003; Nicholson & Henry, 2003):

- Educating clinicians to the likelihood that women with SMI have or will have children, and that parenthood needs to be an important component of treatment planning and case management services from their initiation
- Offering relevant periodic assessments of children, in response to mothers' concerns and to determine changing needs for parenting resources and supports
- Offering education and skill training for all female consumers who are parents
- Ensuring availability of specialized, individualized, or group treatment for mothers and their families when women need this more intensive form of service from their mental health agencies (for example, joint parent-child therapy [Williams, 1998], parent training [Webster-Stratton & Herbert, 1994], parent support groups, or therapeutic nurseries for infants and toddlers.

These programming strategies could be offered through mental health agencies or psychiatric rehabilitation programs; elements of these strategies could be included in existing evidence-based models for adults with SMI, such as assertive community treatment (see Nicholson & Henry, 2003). Models of stand-alone programs, focused on families in which one or both parents have mental illness, are available, although their evidence base has not yet been established (see Cook & Steigman, 2000; Nicholson, Biebel, Hinden, Henry, & Stier, 2001; Nicholson & Henry, 2003; Oyserman, Mowbray, & Zemencuk, 1994). Other strategies could involve psychoeducation programs on mental illness for all family members, including school-age children, support groups, and group or individual therapy for children who are struggling with their parents' mental illness.

As shown by this study, adult children of mothers with SMI demonstrate very heterogeneous outcomes. Our analyses indicate that the adult children whose mothers are diagnosed with bipolar disorders may be at higher risk of problems in adulthood than those whose mothers are diagnosed with schizophrenia or depression. However, more research is needed to substantiate this finding, as well as to explicate the mechanisms through which mothers' diagnoses produce negative effects in children. Irrespective of research findings, social work



administrators and clinicians are advised to attend to parenting concerns of mothers with mental illness, to the benefit of these women, their children, and future generations. **HSW**

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