

Substance Abuse in Children of Parents with Mental Illness: Risks, Resiliency, and Best Prevention Practices

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Published research on the effects of parental mental illness diagnosis or symptoms on childhood substance abuse (SA) is reviewed. Family and environmental circumstances related to having a parent with a mental illness also put these children at risk for SA. Risk and protective factors for developing a substance use or related disorder in these children are summarized. Recommendations for SA prevention in children of parents with mental illness are presented and used to critique existing substance abuse prevention programs. Limitations of the research are noted vis-à-vis lack of participant racial/ethnic diversity, inconsistent results, methodological flaws, and few efficacy studies.

KEY WORDS: adolescents; substance use disorders; parent-child relations; mental illness; prevention.

OVERVIEW

The purpose of this article is to present best prevention practices for children whose parents have a diagnosed mental illness. To identify the “best,” we will utilize a paradigm suggested by Tarter and Vanyukov (2000)—that is, to be effective, selective prevention programs (for high risk groups) need to identify the strengths and vulnerabilities of target group members, by using research results which establish the connections between these factors and the disorder of concern. Prevention programs should then be specifically designed and individually assigned to minimize the manifest risk factors and to maximize protective factors based on research

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and theory (MacLean, Paradise, & Cauce, 1999). Thus, this article begins by reviewing research literature to establish what the risk and protective factors are for substance abuse in the target group (children with mentally ill parents) and to suggest what the underlying mechanisms may be.

We will first summarize evidence of the relationship between parental mental illness (and/or parental psychiatric symptoms) and child/adolescent substance abuse. Numerous research studies find that children of parents with mental illnesses have more negative outcomes than those with undiagnosed parents; however, the extent to which these negative outcomes consistently include substance use disorders has not been previously reviewed. Children of mentally ill parents are at risk of having a diagnosable psychiatric condition themselves (e.g., depression, anxiety disorders) (Fendrich, Warner, & Weissman, 1990; Jacobsen, Miller, & Kirkwood, 1997), academic difficulties (Davies & Windle, 1997), psychiatric symptoms (Neff, 1994), deficits in school competence (Garber & Little, 1999), and child behavior problems (Mowbray, Oyserman, MacFarlane, Bybee, & Rueda-Riedle, 2001).

There are now several comprehensive reviews identifying risk and protective factors for substance abuse (Brounstein & Zweig, 1999; Fishbein, 2000; Gilvarry, 2000; Hawkins, Catalano, & Miller, 1992; Tarter & Vanyukov, 2000; Weinberg, Rahdert, Colliver, & Glantz, 1998). The factors presented are: (1) individual characteristics (genetics, temperament, biological/constitutional), (2) familial relationships (parenting consistency, family conflict, parent/child bonding, nurturance vs. criticism, parental substance use), (3) peer relationships (school bonding, rejection in school, association with normative vs. deviant peer groups), (4) community/neighborhood circumstances (resources and opportunities), and (5) societal/cultural norms (policies and attitudes towards substance use, in-group stigma/acceptance, social marginalization). Although not usually specifically mentioned as a risk factor, parental mental illness itself is related to many of the identified risks. In the second part of this article, we will critically review literature providing support for indirect effects of parental mental illness on child/adolescent substance abuse, that is, the mechanisms through which the mental illness of a parent may increase his/her child's risk for substance abuse and what circumstances may offer protection and mitigate these risks.

The literature reviews presented in the first two sections will allow us to target the specific risk factors experienced by children whose parents have a mental illness, as well as factors that are protective for developing a substance use or related disorder. With these in mind, in the third section of this article, we will present recommendations for prevention of substance abuse in this high-risk population. Existing prevention programs focused on children having a parent with mental illness will be reviewed and critiqued: to what extent do they target prevention of substance use as an outcome? To what extent do they utilize knowledge from the prevention research literature on effective techniques to address substance use? We will then describe and critique current substance abuse prevention approaches for high-risk adolescents: to what extent do they target risk factors most often

associated with having a parent with mental illness? How might they be modified in terms of outreach, referral, or substantive content to be maximally appropriate to this target group? The final section of the article will discuss implications for practice, policy, and research.

Before turning to the literature reviews, readers should appreciate that there are substantial reasons for concern about the overall welfare and outcomes of children whose parents have mental illnesses. First, research on women with serious mental illness diagnoses, such as schizophrenia, major affective disorder, and bipolar disorder, has shown that they have normal fertility rates (Burr, Falek, Strauss & Brown, 1979; Saugstad, 1989); are likely to be sexually active (Cook et al., 1994; Coverdale & Aruffo, 1989; McEvoy, Hatcher, Appelbaum, & Abernethy, 1983); frequently have children (45% of female intensive case management clients in New York are mothers; Blanch, 1991); have higher than average numbers of children (Rudolph, Larson, Sweeny, Hough, & Arorian, 1990; Mowbray, Schwartz, Bybee, Spang, Rueda-Riedle, & Oyserman, 2000b); and are often carrying out childcare responsibilities (32.5% of all women clients studied by Test, Burke, & Wallish, 1990). Furthermore, with advances in psychiatric rehabilitation technology and more effective psychoactive medications, more individuals with psychiatric disabilities who previously would have spent most of their lives in institutions are now receiving treatment in the community. Thus, it appears that individuals with long-term psychiatric disorders will be increasingly involved with parenting roles and responsibilities. However, several research studies have consistently reported that among women with a serious mental illness who are mothers, mental health service providers pay little attention to concerns about parenting or about the welfare of the woman's children (Apfel & Handel, 1993; Beardslee & Wheelock, 1994; Blanch, Nicholson, & Purcell, 1994; DeChillo, Matorin, & Hallahan, 1987; Mowbray, et al., 2000b; Zemencuk, Rogosch, & Mowbray, 1995). Thus, it seems that there may be increasing numbers of children born to parents with mental illnesses, who are at substantial risk for a variety of psychiatric and behavioral problems, but are ignored by mental health providers, even in community-based service programs.

RELATIONSHIP BETWEEN PARENTAL MENTAL ILLNESS AND CHILD/ADOLESCENT SUBSTANCE USE

Some of the literature referenced in this article is taken from a larger review of parenting behaviors and attitudes of mothers with a mental illness (Oyserman, Mowbray, Allen-Meares, & Firminger, 2000). In that review, we searched both *Medline* and *Psychological Abstracts* online from January 1, 1980 to January 1, 2000. Our review concluded that, overall, literature on parents with a mental illness is limited in a number of ways. Most of the published studies focus on parenting with infants or preschoolers. There are fewer studies involving school-age children and very few studies involving adolescents. Systematic comparisons

of results across various developmental stages of childhood are rare. Because of varying methodologies and other differences, it is not possible to compare results by age groups across studies. Further, the majority of studies focus on parents with affective disorders; there are relatively few involving psychotic disorders and even less on anxiety, personality disorders, or dual diagnosis (substance use disorder with a co-occurring psychiatric diagnosis). Also, information on race/ethnicity is not consistently presented, and when it is, most participants in studies appear to be white and middle to high socioeconomic status. Finally, as a rule, studies are small in size and do not utilize random or representative samples. Despite these limitations, a relatively coherent picture of the implications of parental mental illness emerges. However, for this article, a major limitation that remains is the dearth of research on adolescents—a time when substance use problems are likely to emerge.

Pre-adolescent and Adolescent Children of Parents with Diagnosed Mental Illnesses

Our review of research examining the outcomes of pre-adolescent and adolescent children of parents with diagnosed mental illnesses identified 13 relevant studies. Five of these did not include information on children's substance use (Boyle & Pickles, 1997b; Garber & Little, 1999; Hamilton, Hammen, Minasian, & Jones, 1993; Orvaschel, Walsh-Allis, & Ye, 1988; Schwartz, Dorer, Beardslee, Lavori, & Keller, 1990). Four studies included substance use as an outcome variable. Four others examined conduct disorders in children, but not substance use. These studies are included, since conduct disorder (CD) in children is regarded as a high risk factor for later substance use disorders in adulthood (Farrell & Strang, 1991; Gilvarry, 2000; Loeber, Farrington, Stothamer-Loeber, & VanKammen, 1998; Weinberg, et al., 1998).

Fergusson and Lynskey (1993) studied the effects of maternal depression on teacher and self-reports of CD in a birth cohort of New Zealand children, 12–13 years old at the time of the research ($N =$ at least 723). They found small but statistically significant effects from current maternal depressive symptoms and maternal history of depression, with the latter contributing the strongest independent effect. Boyle and Pickles (1997a) examined data from two waves of a community survey of households, concerning childhood psychiatric disorders (the Ontario Child Health Study). The analyses showed small but systematic effects; at both time-points (children age 6–11 and then 12–16), mothers' depression was significantly related to child/adolescent conduct problems as rated by parent, teacher, and child self-reports. Fendrich et al. (1990) studied a group of somewhat older children (average age about 17), who had one or more parents diagnosed with major affective disorder ($N = 220$). Children of depressed parents had significantly higher rates of diagnosis overall—specifically anxiety disorders—but not conduct disorders. The sample of parents ($N = 134$) studied longitudinally

by Rutter and Quinton (1984) were London-based, newly-diagnosed, with affective and non-affective disorders (about 18% psychotic, 43% affective, and 40% personality disordered). Results indicated that persistent (over the four years of the study) disturbance in children (from school ratings) was twice as frequent in families where parents were psychiatric patients than in a control sample, and that the differences were mainly due to an excess of conduct disturbance in the patient-families (statistically significant only for boys). This was more likely to be true in families with personality disorders—where three-quarters of the disturbed children's ratings involved conduct problems.

Four other studies utilized more specific measures of substance use in children/adolescents. In the first, Davies and Windle (1997) assessed the relationship between chronic maternal depressive symptoms and adolescent offspring's depressive symptoms, delinquent activity, alcohol problems, and academic difficulties ($N = 443$ adolescent-mother pairs). Mothers' depression was significantly related to girls' alcohol problems (as well as to other dependent variables) but not to boys' alcohol problems (nor any other dependent variables).

The three other studies examined parental psychiatric versus substance abuse disorders for their effects on substance abuse diagnosis and/or symptoms in child/adolescent offspring. Merikangas, Dierker, and Szatmari (1998) recruited parents primarily from mental health and substance abuse treatment settings and limited participation to having a diagnosable anxiety disorder ($N = 36$) or alcoholism/drug use disorder (SA/D, $N = 52$). Substance use in their children (average age, about 12) versus that of a comparison group ($N = 35$, recruited through random digit dialing) was examined. For both alcohol and drug use, there were significant differences across parent groups: rates were highest in children of the SA/D parents, somewhat lower in children of anxiety-disordered parents, and lowest in the comparison group children.

The second relevant research study was longitudinal (Su, Hoffmann, Gerstein, & Johnson; 1997), investigating families where a parent was substance-abusing ($N = 175$), depressed ($N = 233$), or not disordered (comparison group, $N = 412$). The modal group of disordered parents was recruited from treatment centers and assigned a research-based diagnosis. In terms of adolescent substance use (drugs and alcohol), children of depressed parents had higher rates of use than the comparison group, but the difference was not statistically significant. (Rates for children of substance-abusing parents were significantly higher than those for the comparison group.)

The third study identified untreated substance use disorders in offspring of parents enrolled in an NIMH research study of adult depression (Keller, Lavori, Beardslee, Wunder, Drs, & Hasin, 1992). Parents were either in treatment for depression, relatives or acquaintances of these treated parents, or from the community. From all these parent groups, 19 of the 275 children (6.9%) met substance use diagnostic criteria. Of these 19, 79% had one or more parents with a lifetime diagnosis of major depressive disorder (MDD). Furthermore, 53% of the

19 adolescents had one or more parents with an alcohol use disorder and major depression. Only 10% of the diagnosed substance abusers had parents with neither MDD or an alcohol use disorder. There was also a high rate of comorbidity in the children, with 90% receiving at least one psychiatric diagnosis in addition to substance use.

Thus, this group of studies suggests that having at least one parent with a mental illness contributes to an increased risk of substance abuse and related outcomes (such as CD or depression) for children and adolescents. However, this effect is modest. Further, the research does not provide insight as to whether risk is greater for any particular mental illness diagnosis compared to another. Strengths of this empirical base include reasonable sample sizes and convergence of findings from samples recruited from diverse sources (treatment clinics, medical facilities, community samples). Limitations include the fact that data are insufficient to identify any developmental trends in child outcomes, and that the families studied, for the most part, lack racial/ethnic or social class diversity. That is, samples range from all Caucasian (Fendrich et al., 1990; Keller et al., 1992; Merikangas & Dierker, 1998; Schwartz et al., 1990); 90+% Caucasian (Davies & Windle, 1997; Su et al., 1997); about 80% Caucasian (Garber & Little, 1999; Hamilton et al., 1993); to race not specified (Boyle & Pickles, 1997a, b; Fergusson & Lynskey, 1993; Orvaschel et al., 1988; Rutter & Quinton, 1984). Most of the samples were predominately middle class or higher and involved intact families. Such a lack of diversity in demographics limits the generalizability of these conclusions.

Adult Children of Parents with Mental Illness

There are a substantial number of studies focused on adult children of parents with mental illness. However, nearly all of this research is epidemiological, reporting rates of diagnosed psychiatric disorders and/or psychiatric symptoms in offspring and the extent to which these match the disorders of their parents (see for example, Dworkin, Bernstein, Kaplansky, Lipsitz, Rinaldi, Slater, Corblatt, & Erlenmeyer-Kimling, 1991; Erlenmeyer-Kimling, Squires-Wheeler, Adamo, Bassett, Cornblatt, Kestenbaum, Rock, Roberts, & Gottesman, 1995). Most of these studies have not included alcohol or drug use disorders or related problems as outcomes. However, four exceptions were identified among recent publications.

In a ten-year follow-up study of offspring ($N = 182$), ages 16 to 33, of parents diagnosed with depression, Weissman, Warner, Wickramaratne, Moreau, and Olfson (1997) found that compared to those from non-depressed families, adult children of depressed parents had a five-fold higher rate of alcohol dependence diagnoses (also of major depression, phobias, and panic disorder). The peak ages for onset were in the 15 to 20 year age range. Erlenmeyer-Kimling, Adamo, Rock, Roberts, Bassett, Squires-Wheeler, Cornblatt, Endicott, Pape, and

Gottesman (1997) studied offspring of parents with schizophrenia or affective illness versus parents with no psychiatric diagnosis. Children ranged in age from 7–12 years (mean age 9.5) at baseline data collection and were an average 27.8 years old at the last follow-up. These children and their siblings were administered a structured diagnostic instrument (SADS-L). There were significant differences in the prevalence of many psychiatric diagnoses, including alcohol abuse; however, in this study, contrary to expectations, children of parents with schizophrenia had significantly fewer alcohol abuse diagnoses than the controls.

Another population-based research report on adult children used a stratified sample ($N = 1784$) of Anglo, Hispanic and Black adults, drawn from a large geographic area, and included self-report questions concerning family history of alcohol problems and/or mental illness (Neff, 1994). Compared to adults whose families had no alcohol or mental illness problems, those with parental mental illness reported a greater frequency and quantity of drinking. However, these differences were significant only for females. The final study involved male adoptees separated at birth from their biologic parents (Cadoret, Yates, Troughton, Woodworth, & Stewart, 1995). Biologic parents were identified, located and contacted and both parents and adoptees were interviewed to determine psychiatric diagnosis and substance use. Results indicated that the odds were more than three times greater for an adoptee having antisocial personality disorder (ASP) when their parent had ASP compared to when their parent did not; and that adoptees with ASP were nearly 12 times more likely to show alcohol abuse/dependence than those without ASP.

Unfortunately, this review of research on adult children of parents with mental illness is rather modest. While its results again suggest a relationship between the offspring's substance use problems and parental mental illness, results are complicated and somewhat inconsistent. Further, the studies differ in how mental illness or substance use outcomes were defined. Lack of sample diversity remains problematic. Only the Neff (1994) study contained representation of minority populations (i.e., race was not specified in Cadoret et al., 1995, or Weissman et al., 2000; and Erlenmeyer-Kimling et al., 1997, used an all-Caucasian sample). The next section of this article reviews a related group of studies: parental mental health of adolescents who abuse substances.

Adolescents Who Abuse Substances and Parents' Mental Health

We searched for recent studies of adolescents with substance abuse problems in which parent characteristics were investigated. This search resulted in six relevant studies. One investigated parent life events and health, with no mention of mental health indicators (Dishion, Capaldi, & Yoeger, 1999). Another study (Baumrind, 1991) of adolescents ($N = 139$) examined parental mental illness, but did not further specify the assessment method or the types of illnesses. Results

indicated that for girls (but not boys), those who were dependent on alcohol, drugs or both (compared to girls who were substance users and non-users) were more likely to have a parent with a mental illness (assessed when children were age four). A third study examined substance use disorders, conduct disorder, and antisocial personality disorder (ASP) in first degree relatives of male adolescents in treatment for substance abuse (Miles, Stallings, Young, Hewitt, Crowley, & Fulker, 1998). Compared to a matched control sample, these relatives (male and female) had significantly higher rates of substance abuse disorders and ASP.

Two other studies concerned the effects of anxiety and/or depressive symptoms in parents. Windle (1996) examined the relationship between adolescent drinking type (abstainer, light, moderate, heavy and problem drinker) and maternal depressive symptoms, in a school-based sample of more than 1,000 high school students. No relationship with drinking type was found. On the other hand, Loeber et al. (1998) reported on a school-based follow-up study of urban boys. For the oldest boys (grade 7–8), parental anxiety/depression was a significant predictor of boys' substance use.

Only one study analyzed more than one type of parental psychiatric diagnosis. Moss, Mezzich, Yao, Gavalier, and Martin (1995) examined 10–12 year old sons of fathers with and without a substance abuse disorder. Fathers were also assessed for psychiatric diagnoses; substance-abusing fathers were found to have a greater prevalence of antisocial personality disorder, major depressive disorder, and anxiety disorders (but not adjustment disorders) compared to control fathers. Fathers' negative affectivity explained 56% of the variance in sons' aggressiveness; fathers' substance-abusing status was not significant.

Thus, four of the five studies find a link between teen substance use and symptoms of parental mental illness. However, the research reviewed is again limited in the types of parental psychiatric problems assessed and in consistency of methods. Most samples are neither representative of the population nor multicultural. The exception is Loeber et al. (1998) with a 55% African American sample (other samples were entirely Caucasian (Baumrind, 1991), 98% white (Windle, 1996), predominantly white (Dishion et al., 1999; Moss et al., 1995), or race/ethnicity was not specified (Miles et al., 1998)).

INDIRECT EFFECTS OF PARENTAL MENTAL ILLNESS ON ADOLESCENT SUBSTANCE ABUSE

While research indicates that there are direct relationships between parental mental illnesses and adolescent substance abuse, results are not consistent and have methodological flaws. Along with the overall scarcity and gaps in research on this topic, this suggests that we should examine indirect relationships; that is, family or environmental circumstances related to having a parent with a mental illness may put children at greater risk for substance use disorders. This section

describes risk and protective factors related to substance abuse (as summarized in other reviews: Fishbein, 2000; Gilvarry, 2000; Hawkins, et al., 1992; Tarter & Vanyukov, 2000; Weinberg et al., 1998) at the individual, familial, peer group, community/neighborhood, and societal/cultural levels and how they may be confounded with parental mental illness.

Individual Level Risk and Protective Factors

Fishbein (2000) concludes that “there is convincing evidence for a biological basis for features strongly associated with high risk for drug abuse” (p. 9–10). These include structural differences in regulatory genes and differences in brain structure and central nervous system physiology. These differences are likely a product of genetics *and* environment (for example, poverty, social and environmental deprivation, and other factors can all affect brain function). Furthermore, biological differences can be produced by adverse circumstances prenatally and during birth.

Serious mental illness as well as substance abuse is also recognized as having a biological/genetic basis. Heritability estimates are 20–45% for unipolar depression and 75–80% for schizophrenia and bipolar disorder (Rutter, Silberg, O’Connor, & Simonoff, 1999). Furthermore, there is evidence that individuals with mental illness are more likely to marry other individuals with mental illness (i.e., assortative mating, see Keitner & Miller, 1990; Lancaster, 1999; Rutter & Quinton, 1984), putting children, even more than other first-degree relatives, at particular risk.

A large percentage of individuals with a major mental illness have a co-occurring substance use disorder (40–68% from various studies; Caton, Gralnick, Bender, & Simon, 1989; Toner, Gillies, Prendergast, Cote, & Browne, 1992). Results from the National Institute of Mental Health Epidemiological Catchment Area Study (individuals aged 18 and higher) showed that, for adults with a past history of mental health problems, the risk of alcohol-abuse is double and risk of other drug disorders is four times the norm (Regier, Farmer, Rae, Locke, Keith, Judd, & Goodwin, 1990). Kessler, Nelson, McGonagle, Edlund, Frank, and Leaf (1996) estimated that the lifetime co-occurrence of mental disorders with addictive disorders (in individuals aged 15–54) was 50% (based on the National Comorbidity Survey). Estimates of the co-occurrence of mental disorders and substance use problems in adolescents range from 22–82% (Ragin, Rasinski, Cergone, & Johnson, 1999). That mental health problems increase risk of drug and alcohol problems was also shown in the National Comorbidity Survey where mental health disorders preceded substance addiction in 83.5 percent of co-occurrences; mental health disorders developed most frequently during adolescence.

Thus, genetic vulnerability to mental illness may affect incidence of substance abuse in two ways. First, there could be a heritability factor for the co-occurrence of the two disorders, since its rate is high in adults and adolescents. However,

to our knowledge, a heritability factor for dual diagnosis has not been estimated. Second, parental mental illness may increase the risk of mental illness in offspring, which would also increase the risk of children having substance abuse problems. Data from the National Household Survey of Drug Abuse indicate that substance use is correlated with having more severe emotional and behavioral problems in adolescence (Ragin, et al., 1999). The link between early substance use and behavioral or emotional problems is especially strong (Shedler & Block, 1990). However research is just beginning to map out the interplay of these two disorders in adolescence (Cicchetti & Rogosch, 1999).

Besides genetics, other biological bases at the individual level, related to later dysfunction, could include circumstances at conception, prenatally, and/or at birth and delivery. Research on mothers with mental illness is somewhat sparse in this area and not conclusive. Perhaps the most comprehensive study to address this question involves the 1966 North Finland birth cohort, followed from gestation through birth to the end of their 27th year and cross-checked with psychiatric hospital and outpatient clinic records for schizophrenia diagnoses (Jones, Rantakallio, Hartikainen, Isohanni, & Sipila, 1998). Results indicated that low birthweight, especially combined with short gestation, was more common in patients with schizophrenia, compared to those in an unaffected comparison group. Although the number was small, perinatal brain damage and low Apgar scores appeared to distinguish those who later developed schizophrenia. There were no significant differences in obstetrical complications. A recent study identifies advancing paternal age to be a strong and significant predictor of schizophrenia, but not of other psychiatric diagnoses (Malaspina, Harlap, Fennig, Heiman, Nahon, Feldman, & Susser, 2001).

In addition to individual factors that are clearly biological or genetically based are factors reflecting child or adolescent temperament, development, and skills. In this area, several research studies have shown deficits in children of parents with mental illness. For example, children of mothers with depression have less developed social skills (Gelfand & Teti, 1990); children of mentally ill versus control mothers have poorer intellectual competencies (Goodman & Brumley, 1990), and more behavioral disturbances (Rutter & Quinton, 1984). Additionally, according to Beardslee, Versage, Wright, and Salt (1997), adolescent children of parents with a mental illness may feel that they are responsible for their parents' problems or that their own futures will reflect the same mental/emotional distress.

Familial Factors Related to Child/Adolescent Substance Abuse

A substantial amount of research has been done in this area. Family-related factors for adolescent substance use include family management practices, family conflict, and low bonding to family, in addition to family drug behaviors (Hawkins et al., 1992). As indicated, the literature consistently shows that adults with mental

illness have higher rates of drug and alcohol abuse and dependence. In his review of families with parental depression, Beardslee, et al. (1997) enumerated a number of problems for parents with mental illness that overlap with risk factors for child/adolescent substance use. In particular, depressed parents are less able to provide their children with supports needed to develop appropriate affect regulation, problem solving and self-awareness skills and are less likely to model effective problem solving and communication skills. Literature, although less voluminous, also indicates that families with one or more mentally ill parents also show significant problems in other areas, as described below.

Family Management Practices

Mothers with bipolar diagnoses were found to be more disorganized, ineffective, and tense in interactions with their children, compared to control mothers (Davenport, Zahn-Waxler, Adland, & Mayfield, 1984). Depressed mothers of infants show less affective and interactional synchronization with their infants (Field, Healy, & Leblanc, 1989). Depressed mothers are also more likely to ignore their children and to disengage (Cox, Puckering, Pound, & Mills, 1987).

Family Conflict

Klehr, Cohler, and Musick (1983) found that mothers with serious mental illnesses demonstrated more conflicts with children than control mothers, even after a year-long, intensive intervention. Depressed mothers are reportedly more negative in their responses to children (Conrad & Hammen, 1989) and have been rated as being overly angry (Inoff-Germain, Nottelmann, & Radke-Yarrow, 1997), less positive and more critical (Gordon, Burge, Hammen, Adrian, Jaenicke, & Hiroto, 1989), and less likely to achieve compromise with their children in videotaped family interactions (Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987). Furthermore, much higher levels of family discord have been found in families where one or more parents was a psychiatric patient, compared to controls (Keitner & Miller, 1990; Rutter & Quinton, 1984). In these families, rates of chronic marital conflict, marital dissolution and single parent status are all increased (Downey & Coyne, 1990).

Family Bonding and Relationships

Compared to control women, women diagnosed as mentally ill were less likely to self-describe as encouraging openness or being open with their children in expressing emotion (Davenport, et al., 1984). Women with psychiatric diagnoses (schizophrenia and depression) also showed less maternal affectional involvement and responsiveness than a matched sample of well women (Goodman & Brumley,

1990). Further, insecure and avoidant attachment has been found to be relatively frequent in families with major affective disorder (Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985) as has parental rejection (Keitner & Miller, 1990). Depressed parents are more likely to have negative interactions with their adolescents, and less likely to be sensitive and responsive in their parenting (Beardslee, et al., 1997).

Thus, it seems clear that, in general, children of parents with mental illness experience many of the same family circumstances as those identified as risk factors for substance abuse. In fact, Su et al. (1997) summarize their findings, “families in which parents display a substance use disorder are very similar to those in which parents suffer from affective disorder . . .” (p. 851). Further, the chaos and family problems often seen in families of mentally ill parents have been likened to chronic trauma experiences for children (MacRae, 1996). Traumatic experiences have been found to increase the risks of substance abuse (CSAP, 2000).

PEER RELATIONSHIPS

Children at risk for substance abuse have been found to have less acceptance by their peers overall (for example, rejection in school) and more associations with deviant peer groups. Unfortunately, there is little systematic research on children of parents with mental illness that examines such outcomes explicitly. However, studies have found that these children often have high rates of behavioral problems (Rutter & Quinton, 1984), increased aggression and hostility (Zahn-Waxler, Cummings, McKnew, & Radke-Yarrow, 1984), and make up a sizeable minority of children placed in alternative settings such as foster care (Oyserman, Benbenishty, & Ben Rabi, 1992). These outcomes could certainly reduce mainstream peer group acceptance and increase contacts with deviant peer groups. In addition, qualitative analyses of accounts from adults whose parents suffered from mental illness while they were children include themes of isolation from peers and of dual identities (one life inside the family and another outside) (Secunda, 1997). Growing up, children were afraid to have friends over to their houses because they might find out about the mental illness in their family, or their ill parent’s disturbed behaviors might be the basis for peer rejection. Other children reported retreating into fantasy worlds of their own and other non-social forms of coping. Thus, it seems reasonable to conclude that peer relationships for these children would be likely to be abnormal—however, the extent and significance of this outcome has not yet been quantitatively analyzed.

Community/Neighborhood Circumstances

According to Hawkins et al. (1992), risk factors at this level could include community disorganization and poverty and the related factor of greater drug

availability. Congruent with this are a few research studies on the living circumstances of parents with mental illness. Mothers with mental illness tend to report more hardships than comparison mothers (Goodman & Johnson, 1986) as well as overcrowded living situations (Ghodsian, Zajicek, & Wolkind, 1984). Epidemiological research has repeatedly confirmed that the poor are at increased risk for most psychiatric disorders (Bruce, Takeuchi, & Leaf, 1991); poverty status is also a strong predictor of recurring psychiatric illness (Basic Behavioral Science Task Force of the NAMHC, 1996). Mothers with a mental illness are no exception to these general statistics. A study of a large, urban-based sample of these mothers with serious mental illness found that more than two-thirds lived below the poverty line (Mowbray, et al., 2000b) and that women with a schizophrenia diagnosis lived in census tracts with higher crime rates than was the case for women with affective diagnoses (Mowbray, MacFarlane, Callahan, Bybee, & Oyserman, 2000a). Social stress and lack of social support dampen quality of parenting among mothers with a serious mental illness (Oyserman, Bybee, Mowbray, & MacFarlane, 2002).

Furthermore, in qualitative research, offspring of parents with mental illness frequently report chaos in their households, sometimes exacerbated by service avoidance, due to fears that their family situation will be detected in the community (Secunda, 1997). Marsh and Dickens (1997) presented perspectives from adult children concerning the effects of parental mental illness on the family's social circumstances; these included stigma and discrimination from neighbors and others in the community, rejection and abandonment by extended family and close friends, and a decrease in family social life.

Societal-level Risk Factors for Adolescent Substance Abuse

According to Hawkins et al. (1992), risk factors at the societal level include laws favorable to alcohol consumption and drug use as well as cultural norms on the appropriateness of drinking/drug taking behaviors and public versus private drunkenness. To the extent that adults with mental illness are more likely to be living in poverty, the disproportionate placement of alcohol outlets and advertisements (LaVeist & Wallace, 2000), and the greater availability of street drugs (Lillie-Blanton, Anthony, & Schuster, 1993; Wallace, 1999) in low income neighborhoods would increase risks for their children.

Conclusions About Risk Factors

As this review clearly indicates, children whose parents have a mental illness appear to be affected by many of the conditions identified as substance abuse risk factors for adolescents. In fact, several reviews have concluded that the problems associated with parental alcoholism are not significantly different from those related to parental mental illness, death, physical violence, or other severe family

situations (Brown & Schmid, 1999). Therefore, it seems likely that the relationship between parental mental illness and adolescent substance abuse is mediated by risk factors, such as individual child characteristics, parenting behaviors, community/social relationships, etc. Theorists, authors, and a few research studies have examined some of these mediating relationships.

Hatfield (1996) discusses family members' reactions to a relative with mental illness and how feelings of loss, bitterness and resentment, a sense of helplessness, and burnout from managing high levels of everyday stress build up and eventually cause many negative outcomes (which could include poor coping abilities like use of alcohol and drugs to escape). Lancaster (1999) describes the "dark side of mental illness," where parents' suicidal tendencies, aggression, or paranoid delusions may produce traumatic experiences for a child, with a later reaction similar to post-traumatic stress disorder. Rutter and Quinton (1984) speculated, in discussing their research results, that the effects of parental mental illness were mediated by the child's exposure to hostile behavior, leading the child to increased conduct disorders and later substance abuse and other antisocial acts. This explanation is congruent with a "deviance-prone" model of adolescent substance use, which theorizes that a combination of difficult child temperament, deviant socialization, and lax discipline lead to child behaviors that then promote associations with deviant peers and delinquent behaviors, such as use of drugs and alcohol (MacLean, Paradise, & Cauce, 1999).

In their longitudinal study of more than 1100 10th and 11th grade high school students, Davies and Windle (1997) tested the hypothesis that family discord is a mediator of the relationship between maternal depressive symptoms and adolescent psychological adjustment. Their results supported the hypothesis for three of four criterion measures, including alcohol problems, but for girls only. They concluded that, at least for girls, "maternal depressive symptoms are distal markers of more proximal influences on adolescent conduct problems" (p. 664). These results support an "affect-regulation" model of substance abuse—that is, use of drugs or alcohol to cope with negative emotional states, including depression, anxiety, etc. (MacLean, et al., 1999) and/or with the stress and pressures of adolescence (Keller et al., 1992).

External factors associated with mental illness, such as stigma, lower SES, or reduced social support, can also be intervening variables (mediators or moderators). For example, feelings of shame and embarrassment concerning the parent's stigmatized disorder may cause adolescents to avoid social contacts or to seek out a deviant peer group (Lancaster, 1999). Williams and Corrigan (1992) hypothesized that growing up in a family with a mentally ill parent decreases social support available to adolescents. In a sample of college students, they found differences in depression and trait anxiety between adult children of mentally ill versus normal parents. However, these differences were no longer significant after adjusting for social support.

Similarly, Rutter and Quinton (1984) found that controlling for family adversity (a summary index including marital disruption, foster care placement, overcrowding, low SES, and whether father, mother or both showed psychiatric disorder or criminality), children of psychiatric patients did not show any increase in emotional/behavioral disturbances in school. Congruent with this finding are results reported by Landerman, George, and Blazer (1991). They analyzed data from one of the Epidemiological Catchment Area sites, relating diagnoses of adults and the extent of negative life events they experienced in the year prior to the survey to their self-reported experiences of parental death before they were 10 years old, divorce/separation, or parental mental illness in childhood. The results indicated that in terms of current depressive symptoms, the effect of recent life events was more than twice as large for those whose parent(s) had mental illness than it was for those with no parental mental illness. Su et al. (1997), in their panel study of 600 families, found that parental depression affected adolescent substance use and depressive symptoms primarily through a path in which parental depression had a significant relationship to increased negative life events which then decreased family cohesion; decreased family cohesion related directly to substance use at time 1 and time 2 (controlling for the effects of age, child gender, and family income). The investigators report some subtle gender differences in that female versus male adolescents are influenced by family cohesion to a greater extent.

In summary, it appears as though there is at least some consistent evidence that the linkage between parental mental illness and negative adolescent outcomes, including substance abuse, is through mediating mechanisms. From the studies conducted so far, these mechanisms most often involve the familial level, such as conflict in the family or parenting behaviors, or the community level, such as social stigma, peer rejection, or decreased social support.

By extension, protective factors would be those that decrease family and community stress such as adjusted income, living in safe neighborhoods, and having stable and well-functioning caretakers. These risk and protective factors are likely to interact with those at the individual level. The most often studied variable in this domain is the gender of the child/adolescent. As previously referenced, several studies have reported differential outcomes for female versus male adolescents (e.g., Davies & Windle, 1997; Neff, 1994; Su et al., 1997). The direction of gender differences is congruent with other research findings on adolescent substance abuse which suggest that problems in family interpersonal relationships may have more significant negative effects on girls than on boys (Ellis, O'Hara, & Sowers, 2000). Such findings strongly suggest that adolescent substance abuse prevention services may need to be separately developed and implemented for males versus females.

One other individual-level difference has also been studied and found to have an interactive effect: Rutter and Quinton (1984) rated the children they studied on a temperamental risk index, based on child attributes of negative mood, low regularity, low malleability, and low fastidiousness. Differences were marked:

100% of children with temperamental risk features showed persistent disturbances according to teacher ratings, compared to 41% of children without temperamental features. Exploratory data analysis suggested an interactive effect of child temperament and parental mental illness; children with difficult temperaments may be especially hard for parents with mental illness to rear, as evidenced by the finding that they received more parental criticism than other children. Other individual child characteristics may also interact with parental mental illness, but haven't been studied—for example, child age, maturation level, and IQ.

Finally, as a word of caution—we again reiterate the limited diversity of the research samples included in this review. Many studies were based on samples that were entirely Caucasian, and oftentimes middle class and from intact families, as well. We note that studies with more diversity did not appear to present markedly different findings; however, at this point, there are too few of such studies to allow any comparative conclusions. Thus, prevention specialists working in this area are advised that when dealing with populations from non-white racial/ethnic groups, lower socioeconomic status, and/or single parent homes, the conclusions drawn from this review do not necessarily apply. In these cases, prevention workers need to do more extensive data collection with the identified populations, such as through needs and community resource assessments, before forming conclusions about the nature of the problem or appropriate solutions to address it.

PREVENTION PROGRAMS

A number of authors (e.g., Brounstein & Zweig, 1999; Hazelden, 1996) converge in describing a wide array of factors that can promote resilience in adolescents and buffer risk for substance use/dependence. Resiliency resources include both social-relational and contextual supports, competencies, psychological resources, and the ability to draw on past successes to bolster current efforts. Social and contextual supports include bonding with a parent or caring adult who provides a consistent and nurturing environment, sufficient social support—from family, school and community, as well as opportunities for positive involvement and participation in the community. Competencies include social skills—communication and negotiation skills, problem solving skills, especially the ability to consider alternatives when initial efforts meet with failure, and competence and sense of mastery in at least one life domain. Psychological resources include a good sense of humor, a sense of optimism about the future, a positive sense of self, and the belief that hard work and perseverance count. And finally, resiliency resources should combine competencies and psychological resources—the ability to draw on previous success in meeting challenges and working through problems to bolster the child's current sense of efficacy and competence.

Although mental health providers rarely pay attention to the parenting needs of clients with diagnosed mental illnesses, or even to the extent to which they are

parents (Oyserman, et al., 1994), this does not mean that parents would not be interested in obtaining support if it was offered. Parents with a mental illness are often aware of their needs for parenting support. Wang and Goldschmidt (1996) found that even in a country with a high level of social services (Denmark), one third of a small sample of parents with mental illness reported that they would like to receive more support and that a quarter of their children had been placed outside of the home. In our own on-going longitudinal study of mothers with a serious mental illness, mothers report interest in obtaining support for parenting, and information on how to provide appropriate discipline, how to involve their child's father in childrearing, and how to handle supervision and monitoring of adolescent children (e.g., Mowbray, Oyserman, & Ross, 1995; Mowbray, et al., 2001).

While mentioned as a risk factor in some research (e.g., Angold & Costello, 1993), a specific link between parental mental health problems and adolescent substance abuse is usually not highlighted. However, as our review indicated, parents with mental health problems often exhibit parenting behaviors that can increase risk for substance abuse in their children. This may allow us to extrapolate what are the likely increased risk factors for children and teens living with parents diagnosed with mental illnesses, and the ways that prevention programs may reduce these risks or enhance circumstances that buffer them. For example, in terms of environmental risk factors, parents with a serious mental illness are at increased risk of poverty and social isolation and are therefore more likely to live in neighborhoods with high crime rates. With regard to parenting, while mental illness does not make competent and effective parenting impossible, mental illness, like social isolation and poverty, can weaken parents' sense of efficacy (for a review see Oyserman, Bybee, Mowbray, & Kahng, 2001).

Review of Prevention Programs for Adolescent Children of Parents with Mental Illnesses

An earlier review of the literature on programs for mothers with a serious mental illness (Oyserman, Mowbray & Zemencuk, 1994), failed to identify any programs focused on mothers of teens (as opposed to younger children). However, more recently, through literature reviews, searches of conference presentations, and networking with other researchers, we were able to identify seven programs that provide services to school age or adolescent children living in families with a mentally ill parent (see Mowbray & Oyserman, in press, for details). Listed programs are located all over the U.S., Canada, Australia and Israel, suggesting recognition of this problem in diverse societies.

However, most descriptions of programs for children of parents with diagnosed mental illnesses lack adequate evaluation and program implementation information. Only one of the identified programs has undergone any rigorous

evaluation (Beardslee, Salt, Porterfield, Rothberg, et al., 1993; Beardslee, et al., 1997; Beardslee, Wright, Rothberg, Salt, & Versage, 1996). Beardslee's program utilized an experimental design, with random assignment to a clinician-facilitated (active treatment) or lecture-based intervention (quasi control condition). Eligible families, recruited from a large health maintenance organization, included at least one parent who experienced an episode of affective disorder and one child between ages 8 and 15 who had never been treated for affective disorder. Most of the parents were currently receiving treatment for their disorder; parents with schizophrenia or current drug or alcohol addictions were excluded. The purpose of the intervention was to decrease the impact of family and marital risk factors, encourage the promotion of resiliency in children through enhanced parental and family functioning, and prevent the onset of depression and other mental health problems. The clinician-facilitated condition involved 6–10 sessions, starting with an assessment of all family members. It included individual sessions with parents, an individual session with each child, and one or two family meetings, along with an information packet about depression. The intervention focused on effectively dealing with likely family risks when a parent is depressed, including reduced sensitivity to children's needs, lack of information about risks to children and how children's symptoms could be diagnosed, and lack of knowledge on how to talk with children about parental depression and its sources. In the lecture (control) condition, families received the same packet of information and attended two one-hour lectures, followed by brief question and answer periods.

Beardslee et al. (1997) reported follow-up results for 37 families served, 18 months after the initial intervention. Independent raters documented significant improvements for all families in the number of positive changes in behaviors and attitudes, self-understanding, and the family's focus on their children. Additionally, parents in the clinician-facilitated (versus lecture) condition reported more communication between themselves and within the family and better ability to discuss depression with their children; no differences in parent or child symptoms were reported.

In addition to reviewing the seven identified programs for effectiveness data, we also reviewed program descriptions. Programs were extremely heterogeneous. Some were add-ons to existing services provided to the parent with a mental illness, offering parenting support and/or training (e.g., Beardslee et al., 1997). Some were comprehensive, offering services that the parents' mental health agency should provide—e.g., crisis intervention, coordination of needed services, housing availability, family reunification services (FSS in Iowa City and the Invisible Children's Program in Goshen, New York)—at least for a limited period of time. Several of the programs were for kids only, utilizing a group support model (Finzi & Stange, 1997, Tel Aviv; Kids Link—Vancouver, Champs and Kids with Confidence, Cowling, 1999, Victoria, Australia).

Despite the heterogeneity of available interventions, their program descriptions and summative reviews (e.g., Cook & Steigman, 2000) present some common,

important ingredients relevant to prevention of substance abuse and other problems in school age and adolescent children of parents with mental illness. Following a prevention framework, interventions should work both to minimize risks and to maximize protective factors; this means minimizing family dysfunction and maximizing the child's support system and his/her own competencies. Whether the program provides direct service or coordinates and links with other services, prevention activities need to have a multiple focus on parents, family, and children. With regard to parents, prevention efforts need to ensure that the parent with a mental illness remains as healthy as possible, minimizing negative effects of their psychiatric disorder on parenting. Some adults with mental illness will need parenting assistance; such as education about child development, group support and mentoring from other parents with mental illness, and parent skill training. Family members need support and education about mental illness. Services need to be ongoing and readily available so that crises, family disruptions and child placements can be avoided. Children need their own sources of support and advocacy (e.g., stable adults they can rely on—within or outside the family or same-age or older peers) and help in understanding their parent's mental illness and their separateness from it. These sources of support can increase the child's sense of self-efficacy, decrease stigma and shame children experience, and also increase their social connectedness. Finally, programs should include early identification of child problems and ready access to child and family treatments.

Adolescent Substance Abuse Prevention Programs for Children with Mentally Ill Parents

There are overlaps in risks for children whose parents have diagnosed mental illnesses and those at risk for substance use/dependence. Because there are many established and proven effective models of adolescent substance abuse prevention, program developers should examine the extent to which these models may be applicable to children with a mentally ill parent. Program selection, of course, should be in keeping with the risks found for children and adolescents whose parents have diagnosed mental illnesses. Thus, programs that support parents, provide help in parenting and in connecting families to communities, promote youth's development of social competencies and reduce the risk of behavioral problems are likely to also reduce the risk of adolescent substance use. In this section we examine whether current adolescent substance abuse prevention efforts are likely to meet the needs of young offspring of mentally ill parents. Our examination is based on a recent Center for Substance Abuse Prevention publication (Brounstein & Zweig, 1999), which reviews preventive programs that were (1) formally evaluated and found to have consistent, credible and positive results and (2) funded by CSAP. Eight programs were included: Across Ages, Child Development Project, Creating Lasting Connections, Dare to be You, Greater Alliance of Prevention Systems,

Residential Student Assistance Program, Smart Leaders, and the Family Advocacy Network. These programs are primarily school and community center-based and mostly work with teens themselves, except for the Dare to Be You, Creating Lasting Connections, and Family Advocacy Network programs. The latter two are community, center-based programs involving teens and their parents. Dare to Be You is not considered further in this review because it focuses only on two to five year olds.

With regard to providing parents with support, training, or self-help groups, both Creating Lasting Connections and Family Advocacy Network have parenting skills components. Both also provide youth with social competence and communication skills training. In this regard, both focus on issues likely to be risk factors for teens growing up in homes with a mentally ill parent. In fact, the Creating Lasting Connections program, a 20–25 week series including 20 hours of parenting skills and 15 hours of communication skills, as well as 20 hours on substance use issues, showed increased engagement of parents in church activities and increased use of community services—both likely to help reduce the social isolation experienced by many families when a parent has a mental illness. Further, youth improved in their communication skills and learned more constructive decision-making skills. This program has now been revised for national distribution and includes separate parent and youth training as well as an optional combined set of sessions. The revised intervention includes 3–4 modules scheduled in 5–6 week sets that can be spread over a year. Modules typically involve 2.5 hours per week for parents and 1.5 hours per week for youth, although each can be offered separately. For parents, the modules include developing positive parental influences, raising resilient youth, parent communications training, and the final combined communications sessions with youth. Youth sessions include developing a positive response, developing independence, and communications training.

The other parent and youth together program, Family Advocacy Network (FAN Club), focuses on Boys and Girls Club members rather than church members. The family focus of this program could be very relevant to the needs of families with a seriously mentally ill mother; it includes developing a positive family bond, reducing maternal isolation, and providing social and instrumental support for families. Findings suggested better marijuana refusal skills in the family group youth; other differences did not differentiate between youth receiving program components that did or did not include family intervention. The intervention focuses on young teens, average age of 11 years at pre-test, so that substance use is low to begin with.

While parents with a serious mental illness are in need of programs that support parenting, provide parents an opportunity to learn to effectively communicate with their children and to obtain needed material and other supports, these issues are rarely targeted specifically in substance abuse prevention programs. Similarly, youth's needs to understand their parent's mental illness and to be able to separate from it, are also not addressed in these programs. School-based programs described

in the CSAP publication sometimes provide opportunities for parent involvement but do not target the specific needs of parents with a diagnosed mental illness. For example, the GOAL program (Danish, 1996), winner of the 1996 Lela Rowland Prevention Award, focuses on junior high school students, increasing their ability to set, define and work toward personally relevant goals by seeking support from others, identifying and building on personal strengths. While this program seems likely to be extremely helpful for youths, it is unclear to what extent youths already facing mental health or behavioral problems and youths living in homes with parental psychopathology will be able to benefit from the group since support to parents is not provided.

We also located a number of prevention research programs, not included in the CSAP publication. In a review of common risk and protective factors and how they are targeted in successful prevention programs, Durlak (1998a) lists low socioeconomic status, parental psychopathology, marital discord, and punitive childrearing as family-level risks, and early onset of problems and problems in multiple domains as child-level risk factors. Durlak highlights the need to seek out interventions that both reduce risk and also increase protective factors; for example, by both reducing parenting stress and increasing parenting warmth (Durlak, 1998b). Durlak and Wells (1997) provide evidence from a meta-analysis of 177 primary prevention programs designed to prevent behavioral and social problems in children, promote their social competence and ability to successfully navigate life transitions showing an average positive effect, with between 59–82% of prevention programs surpassing the performance of control groups. Specifically, they find that while prevention efforts to ameliorate child-level risks in terms of problem solving, communication, and social skills as well as depressive affect are successful, they have mostly targeted latency-age children in school-based programs. However, it is not clear that such population-based (universal) prevention programs will work for higher risk children of parents with diagnosed mental illnesses. Moreover, when a parent has a mental illness, children may be at risk of both substance use and other emotional, behavioral and mental health difficulties, which in combination may result in greater functional impairment and worse prognosis for either mental health or substance use problems (Angold & Costello, 1993), highlighting the need for selective interventions. Further, while some common risk factors have been identified for both mental health problems and substance use among adolescents, the degree of overlap in these factors has not been established.

Given that children of parents with a serious mental illness may need more targeted interventions, the universal, population-based prevention approaches just described may not be sufficient. Selective approaches are likely to be needed. Models developed for adults with drug abuse problems to improve their parenting could possibly be adapted. For example, Luthar and Suchman (2000) describe a developmentally informed, supportive psychotherapy program for heroin-addicted mothers and its evaluation. The “Relational Psychotherapy Mothers’ Group” offered

24 weekly group sessions to supplement standard methadone treatment. The sessions equally focused on the women's own functioning (anger management, coping with depression, self-esteem problems, etc.) and on specific parenting issues (strategies to minimize conflict, establishing age-appropriate limits for children, fostering appropriate parenting styles, etc.). In a randomized clinical trial, women in this program (compared to a control group receiving only standard methadone counseling) demonstrated lower risk for child maltreatment, greater involvement with their children, and more positive psychosocial adjustment, and their children showed fewer problems in multiple areas.

Another promising possibility is that children of parents with a serious mental illness could form support groups much like the children of alcoholics and adult children of alcoholics. That is, children of alcoholics often experience stressed or traumatized family functioning and are at elevated risk of later depression and substance use (Adger, Macdonald, Wenger, Emshoff, & Price, 1999; Ott, Tarter, & Ammerman, 1999). Lessons from this perhaps larger group of children could be helpful in determining appropriate interventions for children of parents with a serious mental illness. One issue raised by this parallel is whether it is helpful for children of seriously mentally ill parents to take on such a label. Among children of alcoholics, it is deemed useful because it makes children aware of the need to make a conscious choice to break with family patterns and it provides a cognitive link between the child's suffering and family patterns as a source of this suffering. Is the same true for children of seriously mentally ill parents? Certainly Beardslee argues the need for children to know about the etiology of mental illness, that they are not responsible for parental mental illness, and that they are separate from it. Just as in the literature on children of alcoholics, attention should be paid to providing children and families with a "challenge" model that focuses on strengths and competencies rather than a "damage" model that focuses on pathology and problems. And, just as children of alcoholic parents are at risk of growing up in family environments that are chaotic, changing, and unstable, so are many children from families with seriously mentally ill parents. By allowing children to voice feelings of loneliness, fear, and shame about parental behavior, such groups may help children develop strengths.

Another parallel between growing up in a family with alcoholism and one with mental illness is that children are likely to experience both chronic trauma through normalization of unstable, unpredictable, or inconsistent parenting and family circumstances, as well as more acute trauma and discrete traumatic events. Chronic trauma is likely to be linked to emergence of depression and withdrawal in children. It is also linked with inadequate rather than developmentally appropriate support for children and lack of sensitive, attuned parenting—leaving children with either too few links to relationships outside the family, not enough support and supervision within the family, or inadequate models for appropriate development of social competence. Similar concerns have been raised about children of parents

with diagnosed mental illnesses, although evidence of specific parenting problems linked to social isolation or lack of social competence in children of mentally ill parents is lacking (for a review see Oyserman et al., 2000).

Treatment for children of alcoholic parents focuses on allowing participants the chance to describe their home situation, separate and detach from problematic and traumatic elements, and construct a new sense of self focused on competencies, utilizing a variety of therapeutic modalities, including Al-Anon. Similarly, Price and Emshoff (1997) suggest development of social competencies including the ability to express feelings and solve social problems in children of alcoholics as a prevention strategy.

Finally, with regard to using the media as part of a prevention strategy, just as public recognition of alcoholism and the shift from a morality to a disease frame has helped reduce stigma for children of alcoholics, a prevention program aimed at reducing community stigma about depression and other mental health problems is likely to be extremely helpful in allowing families and children to deal more competently with the stresses of mental illness in the family.

Thus, the literature suggests that children can be taught social competencies in school settings, competencies that they may not have had a chance to learn growing up in families with a mentally ill parent. The literature also suggests that learning these skills and improving parenting can reduce risk of substance abuse. Too little is as yet known about the ways that programs for parents with a serious mental illness can be used to reduce risk of substance abuse and the ways that programs focused on reducing substance abuse can help parents with a serious mental illness in their parenting tasks. A critical common risk factor relates to parenting stress, lack of support, and difficulties in parenting. Thus, we suggest that prevention services should be family rather than school based. In our own research, we are currently examining the extent to which mothers who have received or are receiving community mental health services view themselves as having a mental health problem and whether they have talked with their adolescent child about perceived problems. Understanding the extent that mothers are willing to identify as having a mental health problem, how they describe the problem and how they talk about it with their children is critical if we are to develop appropriate recruitment techniques for such a family-based approach.

IMPLICATIONS

Practice Implications

Clients with diagnosed mental illnesses who are parents have many needs—so do their children. Thus, it seems incredible that mental health practitioners still focus almost entirely on the identified client as if he or she had no social context,

no children or family obligations. Or, even when they do, that no arrangements are made for assessment of the status of these children. Furthermore, few agencies have any prevention or early intervention programs targeted for these high-risk children. According to Beardslee and Wheelock (1994): "Largely absent from the literature on children of parents with affective disorder is any focus on the prevention of disorder in these youngsters" (p. 474). Clearly, a first step in practice with parents with mental illness is for practitioners to be more aware of parenting and of offspring risk and protective factors and to attend to who among their adult clients have parenting responsibilities. Agencies should routinely require assessments of these children and their needs, as well as of the parenting strengths and deficits of their adult clients, and their community and extended family support systems. Differential needs of boys versus girls and of children at different developmental stages should be considered. In this way, the need for prevention programs would be clearer and identification-selection mechanisms more appropriately used and at earlier time points.

Another practice implication concerns better coordination between mental health and substance abuse service providers and those agencies that primarily deal with children—for example, the school system and the juvenile courts. Thus, the families of children who are identified as at risk for serious substance abuse problems (i.e., based on early use of gateway substances, such as cigarettes, beer, or wine; or conduct disorders, or other minor delinquency) need to be considered—not just the children. Where one or more parents have a mental illness diagnosis, children may need to be involved in more specialized prevention approaches, in order to help the child/adolescent better deal with the parent's mental illness and/or with peer group and community rejection he/she may be experiencing—subjects that are undoubtedly too sensitive to deal with in any general prevention program for children, or for which intervention staff may have limited knowledge or expertise.

Policy Implications

Managed behavioral healthcare is becoming commonplace in public and private (employer-based) systems of delivering mental illness and substance abuse prevention and treatment services. The term "managed care" is used to describe health plans that incorporate mechanisms to monitor and authorize service utilization, replacing the traditional fee-for-service arrangement with a negotiated, capitated payment per enrollee. As of 1998, at least 47 states had redesigned their Medicaid programs, and 54% of Medicaid recipients were enrolled in some form of managed behavioral healthcare (Findlay, 1999). Policy recommendations should be framed within this developing context, if they are to be heard.

Managed behavioral healthcare approaches usually have as their goal controlling costs, as well as increased access to care and improved long-term outcomes, like better functioning and decreased disability. Obviously, children of parents

with mental illness diagnoses are a high risk population in which some resource investment in identification, assessment, prevention and treatment would certainly be warranted. One policy implication from our review is that managed behavioral health care companies should mandate addressing the needs of children of parents with mental illness (among other groups). This would entail conducting family assessments (nuclear and extended families, especially for single-parent households) and providing prevention, early intervention, and treatment services, as indicated by children's needs and existing support systems.

On a larger public policy level, we need to highlight the negative role played by mental illness stigma in much of the research reviewed in this article. Having a parent with a disability can produce adverse consequences for any child—in terms of disruptions in family operations, family authority structure, worries about the future, play and other developmental activities. However, when a parent has a mental illness, all these problems are possible, but they may be exacerbated and/or have additional complications because of mental illness stigma. Mythologies about mental illness still abound, having moralistic overtones. So adults with mental illness are not just faced with a disability, but also with beliefs from the public about the permanency of their condition and its lack of treatability, that mental illness puts an individual on an irreversible and progressively deteriorating course, that mental illness is all-encompassing of the individual's functioning, and, in effect, eliminates any possible strengths and capabilities that may have been present before mental illness onset.

Furthermore, and perhaps worst of all, there is a pervasive fear of individuals with mental illness, based on beliefs that they are erratic, unpredictable, and likely to be uncontrollably violent without any warnings or predictable antecedents (Bhugra, 1989). Such beliefs make it extremely difficult for adults with a mental illness to acknowledge their own problems, admit their needs and enter treatment, talk to their children about these problems, or ask for parenting assistance from family or community members (Link, Struening, Rahav, & Phelan, 1997). Furthermore, if individuals are able to overcome such negative beliefs, their efforts to acknowledge problems, communicate, and/or ask for help and support may be rebuffed by family, community, and even treatment providers (who are not immune from the effects of mental illness stigma) due to their tendencies to see the mental illness and not the individual who has such a label (Callicutt & Price, 1997; Werrbach & DePoy, 1993). The pervasiveness of mental illness stigma calls for educational campaigns - and perhaps the school system would be a good place to start.

Research Implications

While research results are certainly sufficient to provide support for the high risk status of children of parents with mental illness and therefore the need to move ahead with prevention programming, they are by no means complete or

even satisfactory. Expanded research is needed to address the following significant questions:

- To what extent are the same risk factors and vulnerability mechanisms common across class lines and racial/ethnic groups?
- How do vulnerability and risk factors interact with the child's gender, or other individual characteristics, and the gender of the affected parent?
- How does parental mental illness onset differentially affect children at different developmental stages? What are the effects of living with a parent who has a mental illness across the developmental stages of childhood and into adulthood?
- How does parental mental illness diagnosis or co-occurring psychiatric and substance use disorders differentially affect children and their substance abuse risks? What are specific clinical features in the parent's psychiatric history, current symptomatology, parenting attitudes, etc., which put their children at highest risk?
- What are the environmental factors that may exacerbate such risks (such as poverty, urban environments, drug accessibility, poor school systems, prevalence of gang-connected ideologies, etc.), or buffer their effects (such as attachment to positive peer groups or to the school, availability of non-parent mentors or positive role models, child competencies, neighborhood or community resources and opportunities, etc.)?
- How cost-effective are prevention programs in reducing the likelihood of substance abuse and other negative outcomes in children of adults with mental illness?

Research providing insights on answers to these questions could help prevention specialists improve their ability to identify children, families, communities, and social circumstances that present the highest risks and prioritize programs for these situations. It would also enable treatment providers to understand and act on a knowledge base that could assist in improving referrals and for documenting the need for new programs. Finally, evidence of the effectiveness of existing prevention programs, especially differential effectiveness for subgroups of the target population, could help enormously in establishing policy for service requirements as well as for anti-stigma education campaigns, by showing that with appropriate assistance, adults with a mental illness can parent their children effectively, and do not inevitably fit the pervasive negative stereotypes which abound.

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