

Children of Mothers with Serious Substance Abuse Problems: An Accumulation of Risks[#]

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ABSTRACT

This study examines the life circumstances and experiences of 4084 children affected by maternal addiction to alcohol or other drugs. The paper will address the characteristics of their caregivers, the multiple risk factors faced by these children, their health and development, and their school performance. Data were collected from mothers at intake into 50 publicly funded residential substance abuse treatment programs for pregnant and parenting women. Findings from this study suggest that children whose mothers abuse alcohol or other drugs confront a high level of risk and are at increased vulnerability for physical, academic, and socioemotional problems. Children affected by maternal addiction are in need of long-term supportive services.

Key Words: Substance abuse; Children; Risk factors; Mothers.

Although there are few reliable estimates of the numbers of children in the United States whose mothers are addicted to alcohol or other drugs, the information available suggests the number may be shockingly high. Researchers estimate that up to 15% of all American women between 15 and 44 years old abuse alcohol or illicit drugs (1). Results from the combined 2000 and 2001 National Household Survey on Drug Abuse (NHSDA) indicate 3.7% of pregnant women reported using illicit drugs in the prior month (2). Also based on the NHSDA, it has been estimated that 10% of children (more than 7 million) have at least one parent who is dependent on alcohol or illicit drugs and that 6% have at least one parent who is in need of treatment for illicit drug use (3). These estimates suggest that millions of children currently are being reared in environments characterized by maternal addiction.

Children of substance abusing parents are widely considered at high risk for a range of biological, developmental, and behavioral problems, including for developing substance abuse problems of their own. However, while much has been written about possible risks that parental substance abuse poses to children, there is almost no systematic documentation of the life circumstances of these children. Further documentation of the life experiences of such children is critically needed for both policy makers and those involved in planning health and human services. Although studies examining the effects of prenatal exposure to drugs and alcohol on the health and early developmental course of children are making clearer the biologic vulnerability of children born to addicted mothers, comparatively little attention has been given to the postnatal environmental factors that may negatively impact children's development. The broader literature on risk exposure suggests that the accumulation of postnatal environmental risk

conditions may combine with prenatal exposure to alcohol or other drugs (AOD) in both an additive and an interactive fashion, dramatically increasing total vulnerability to developmental problems.

The limited research on families affected by parental addiction consists mostly of case studies or studies involving very small samples. Thus, there is reason to be concerned about generalizability. Moreover, studies of chemically dependent families have focused most commonly on intact families with an alcoholic father (4). To what extent the impact of paternal alcoholism on children may be similar to that of maternal substance addiction is unknown.

The purpose of this study is to offer some insight into the life circumstances and experiences of a large group of children affected by maternal addiction, children whose mothers' addiction is severe enough to warrant their admission to long-term residential facilities for pregnant and parenting women and their children. This paper will address the following questions about this group of children: 1) Who is acting as the primary caregiver for these children? What strengths and/or challenges do these caregivers have that would affect their ability to provide for the physical and emotional needs of the children in their care? 2) What percentage of children operate under multiple risk factors known to lead to poor outcomes? 3) What physical or developmental problems do these children experience? 4) How do these children perform in school?

METHOD

Procedure

Our study relies on data collected on women and children served by the Residential Women and Children (RWC)/Pregnant and Postpartum Women (PPW) programs. The Substance Abuse and Mental Health Services Administration/Center for Substance Abuse Treatment (CSAT) funded the projects from 1993 to 2000. Each RWC/PPW project developed residential substance abuse treatment programs for women, including pregnant and postpartum women and their infants and children, and participated in a national cross-site evaluation.

The national evaluation collected data from 50 (26 RWC and 24 PPW) projects from 1996 to 2000. These programs were diverse in many ways. Some targeted clients from specific racial or ethnic groups, while others served diverse clienteles. The RWC/PPW projects were located across all regions of the country, with the largest numbers of programs in the Northeast. While most programs were located in urban areas, others



were located in suburban neighborhoods or rural areas, with a few on Indian reservations.

Each RWC/PPW project collected and submitted a standard set of client- and child-level data on a quarterly basis. Programs used software provided by CSAT's cross-site contractor to transmit data to a central location for processing and analysis. All programs involved in the cross-site study were required to send staff to a conference where they were trained in the procedures of the study and in the administration of the data collection instruments. Due to possible staff turnover, further training also was offered at later grantee conferences and during site visits.

Instruments

This paper uses data collected from families at intake into treatment. The data collection instruments were developed by CSAT staff and their cross-site contractor, with extensive input from experts in the field. The team reviewed relevant literature from the field of substance abuse treatment and prevention, as well as existing data collection tools, and developed two intake instruments: one for women entering treatment and one for their children. Both intake instruments were designed to be administered to the mother by a trained staff member (usually the counselor or intake coordinator) during the first week after treatment entry.

The intake instrument for women entering treatment was designed to collect information about individual, familial, and social factors believed to affect women's retention in substance abuse treatment and the probability of successful completion of treatment. Parts of the instrument were modeled after the Addiction Severity Index (ASI), a widely used semi-structured interview, which is designed to gather information about aspects of a client's life that may contribute to their substance abuse problem (5). Like the ASI, the cross-site instrument covered areas such as past treatment history, income and employment, physical and mental health symptoms, family history of mental health and substance abuse problems, abuse history, legal involvement, and past and current AOD use.

The team also reviewed literature on substance abuse prevention and factors influencing children's early experimentation with drugs or alcohol. Based on this review, an instrument was developed to collect information about children entering treatment with their mothers. This instrument covered areas such as prenatal exposure to alcohol and other drugs, child custody and living situation, father involvement, physical health problems, performance in school, and experimentation with tobacco, drugs, or alcohol (for older children).

Physical and Developmental Problems

One goal of the present study is to describe various physical health conditions and developmental delays experienced by children who enrolled in treatment with their mothers. These data were obtained through mother-report at intake into treatment. As it is unlikely that certain conditions would be diagnosed in very young children, we developed minimum age criteria for each condition in consultation with a developmental pediatrician. Only those children meeting the age criteria were included in the analyses describing the prevalence of various conditions in this sample. The age criteria were not designed to reflect the minimum age at which a child

Table 1. Sample description.

Description of mothers (n = 2746)		
Race		
African American	46.3%	
White	31.6%	
Hispanic	9.7%	
Native American	6.9%	
Multiracial	2.1%	
Alaskan Native	1.5%	
Other	1.8%	
Marital status		
Single	59.8%	
Married	13.0%	
Separated	13.3%	
Divorced	12.1%	
Widowed	1.8%	
Pregnant	22.1%	
Mean age	30.6 (SD = 6.1)	
Description of children (n = 4084)		
Male	49.0%	
Female	51%	
Mean age	3.8 years (SD = 3.4)	
Child placement	Legal custody	Living situation
Mother	67.1%	45.8%
Father	0.9%	4.1%
Mother and father	12.8%	9.0%
Grandparent	2.1%	13.3%
Other relative	0.8%	6.0%
State	13.8%	15.9%
Other	2.5%	5.7%



could experience a condition but rather the age by which it is reasonably likely that a diagnosis would be made (i.e., some conditions such as learning delays would likely go undiagnosed until school entry).

Sample

Of the 4520 children who entered treatment during the cross-site study period, 4084 are included in these analyses, along with their 2746 mothers. Four hundred and thirty-six children were excluded due to missing data. As shown in Table 1, nearly half of the mothers in this sample were African American, and they ranged in age from 16 to 54 years. Children ranged in age from newborn to 17 years of age. The majority of children were in the legal custody of their mother (67.1%) or mother and father (12.8%) at intake into treatment. However, for many children, there was a discrepancy between the person(s) holding legal custody of the child, and the person(s) who actually cared for the child prior to admission. For example, while few grandparents or other relatives had legal custody of the children, 13.3% lived with their grandparents or relatives in the 30 days prior to admission.

RESULTS

Description of Caregivers

Mothers

The mothers faced many challenges that could limit their ability to provide for their child's physical and/or emotional needs: chronic drug use, few financial resources, unstable housing, familial history of abuse, legal problems, problems with physical and mental health conditions, and lack of social support from family and friends. The vast majority of women were chronic drug users, with an average of 15.9 [standard deviation (SD) = 6.7] years of AOD use prior to treatment entry. Most women had been in treatment before (85.9%). Crack/powder cocaine was the most commonly used primary substance of abuse (50.4%), followed by alcohol (13.0%), amphetamines (11.1%), and heroin (8.8%). Most women were unemployed (88.9%), lacked a high school degree or GED (51.7%), and relied on public assistance as a source of financial support (70.6%). Thirty-two percent had been homeless in the two years prior to entering treatment.

The women had a variety of legal problems that brought them into contact with the criminal justice and/or the child protective services systems. Two-thirds (66.4%) of the women had been arrested, and over half

(52.0%) were involved with the criminal justice system at the time of admission. The majority had become involved with the child protective service system (54.7%), and 41.8% had a child removed from their care by someone in the child welfare system.

Histories of victimization as well as mental and physical health problems were common among these women. More than half of the women reported a history of abuse by their parents (57.4%) and nearly three-fourths (73.6%) reported being a victim of abuse by someone other than a parent. Physical health problems were reported by 66.9% of women, and 58.1% reported a mental health problem. The most commonly reported physical health problems were respiratory problems (24.1%), sexually transmitted diseases (13.4%), and other gynecological problems (11.9%). The most commonly reported mental health problems were depression (40.1%), psychological trauma (10.7%), and bipolar disorder (6.7%). One-fourth (29.8%) of women reported at least one attempted suicide.

There is some evidence to suggest that most women lacked social support from nondrug involved family, friends, or partners. Many women had a relationship with a partner, and nearly one-third (31.9%) lived with a spouse or partner in the year prior to treatment entry. Of those women with a spouse or partner, 44.5% reported that their partner got drunk frequently, and 57.5% reported that their partner used drugs other than alcohol. Only 25.2% of women reported receiving any financial support from their partner for their children. Three-fourths of women (79.3%) reported that their family members were involved in alcohol or drug related activities, and 42.9% reported having fewer than two friends that did not use drugs.

Fathers

Relatively few children had a relationship with their father (either biological or stepfather). Mothers reported that 30.6% of children never saw their father in the year prior to treatment entry, and an additional 15.5% percent saw them only once or twice. As to the nature of their child's relationship with their father, 31.4% of the children were reported as having "no relationship" with their father, 17.8% a "distant" or "poor" relationship, and 50.8% had an "adequate," "friendly," or "close" relationship. According to mothers' reports, 51.0% of fathers used illegal drugs. Only 13% of mothers reported receiving child support.

Grandparents

Thirteen percent of children lived with a grandparent prior to treatment entry. Information about the history of the maternal grandparents was



collected at admission to treatment, and reports from mother bring into question the grandparents' ability to adequately parent their grandchild. For children living with a grandparent, the low level of father involvement in this sample suggests it would likely be the maternal grandparent.

For the children living with their grandparents prior to admission, 32.4% of the grandmothers and 54.0% of the grandfathers were described as having gotten drunk "sometimes," "often," or "very often" when the mother was a child. Furthermore, 18.3% of these grandmothers and 23.5% of grandfathers reportedly used other drugs. Nearly one-fourth (23.1%) of grandfathers and 7.9% of grandmothers spent time in jail or prison. A substantial portion of women in treatment reported they were physically abused by their mother (25.5%) and father (28.1%). A smaller number reported sexual abuse by their mother (2.7%) or father (13.2%). Finally, 59.0% of mothers reported witnessing violence at home while growing up.

Risk Index

Table 2 shows the comparison of an 11-item risk index with national estimates. The risk index comprises factors that research has shown to be

Table 2. Percentage of children with risk factors (n = 3529).

	Children in treatment	National
Homeless in past two years	28.2	NA*
Poor quality father relationship	49.0	NA*
Not living in two parent home	90.9	31 [†]
Maternal use of AOD while pregnant	61.6	3.7 (drugs) [‡] 12.9 (alcohol) [‡]
Maternal use of cigarettes while pregnant	69.8	19.8 [‡]
Placed in NICU at birth	18.6	NA*
Low income status	91.3	17 [†]
Mother involved with child protective services	56.6	NA*
Maternal mental illness	58.3	21% [§]
Low maternal education	52.2	18% [†]
Minority status	77.2	30.9
Mean no. of risk factors per child (of 11)	6.5 (SD = 1.7)	

*Not Available—no reliable estimates could be obtained.

[†]Source. Annie E. Casey Foundation (6).

[‡]Source. Substance Abuse and Mental Health Services Administration (2).

[§]Source. Nicholson et al. (7).

^{||}Source. US Census Bureau (8).

associated with poor physical, academic, or socioemotional outcomes for children. With few exceptions (homelessness and child placed in Neonatal Intensive Care Unit (NICU) at birth), each risk factor was present for at least half of the children in this sample. The most common risk factors were the family's low-income status and the child not living in a two-parent home. To assess the extent to which children were exposed to multiple risks, we summed the number of risk factors present for each child. On average, children in this sample were faced with 6.5 (SD = 1.7) risk factors. The median number of risk factors was 6. Where it was possible to make comparisons with children nationally, each risk factor was at least twice as common for children in this sample.

Physical and Developmental Problems

Table 3 compares the prevalence of various physical health problems and developmental delays in the children in this sample (as reported by mothers at intake into treatment) with children nationally. For many conditions, there was very little difference between the two groups of children. However, compared with children nationally, children in this sample were more than twice as likely to have asthma, three times as likely to have hearing problems, and seven times as likely to have vision problems.

Table 3. Percentage of children with physical and developmental problems.

Condition (minimum age*)	Children in treatment	National
Asthma (6 mo)	14.8%	6.2% [†]
Fetal alcohol syndrome (3 y)	0.3%	0.03–0.22% [‡]
Hearing problems (3 y)	2.4%	0.7% [§]
Vision problems (3 y)	5.2%	0.7% [§]
Mental retardation (6 y)	0.8%	0.9% [§]
Learning disorder (7 y)	7.1%	5.2% [§]
Motor skills disorder (7 y)	1.4%	2.1% [§]
Communication disorder (3 y)	3.8%	2.1% [§]
Attention deficit disorder (7 y)	8.4%	4–12%

*Analyses were restricted to children meeting minimum age requirement. Age requirements were designed to reflect age by which child would likely have been diagnosed with a condition.

[†]Source. US Dept of Health and Human Services (9).

[‡]Source. Center for Disease Control and Prevention (10).

[§]Source. US Census Bureau (11).

^{||}Source. Brown et al. (12).



School Performance

Analyses of the children's school performance were limited to the 905 children in first grade or above. According to the mother's report, 81.9% of school age children were at the right grade level for their age, and 90.5% had successfully completed the last academic year. Mothers reported that 17.0% of children received some special instruction service (remedial education, special education classes) in the 6 months prior to treatment entry.

For children enrolled in school, their mothers reported on their school behavior at the end of each quarter. For children on whom quarterly data are available during the school year (605), 24.4% of mothers reported having been contacted by the school during the quarter because of the behavior of their child. Another 10.9% reported that their child had a serious argument or fight with their teacher.

DISCUSSION

Results from this study indicate that, on average, children affected by maternal addiction confront a high level of risk. From the time of their conception and continuing throughout childhood, their environment has been characterized by an accumulation of factors known to place children at increased vulnerability for physical, academic, and socioemotional problems. The majority of these children experienced prenatal exposure to alcohol, other drugs, and cigarette smoke, and nearly a quarter of these children had health problems at birth. After birth, the life course tends to be littered with obstacles to success, such as low income status, low maternal education, maternal mental illness, instability in caregivers, residential instability, child abuse and neglect, little father involvement, and experiences in foster care.

Of the 11 risk factors examined in this study, 2 factors (low income status and not living in a 2-parent home) were present for almost all of the children, and all but 3 risk factors were present for more than half of the children in the sample. Furthermore, where national data are available for comparative purposes, children in this sample were at least twice as likely to be exposed to a given risk factor than children nationally. These comparisons with national samples are somewhat imprecise, in that such estimates are difficult to obtain, and the present sample is not comparable with national samples on factors such as race or income (although if they were comparable, they would not be "at-risk"). While any particular comparison may be inexact, the overall pattern still suggests that children whose mothers abuse AOD are far more likely to be exposed to a variety of risk

factors compared with other children. Clearly, when a mother's addiction has progressed to the point that she seeks treatment in a long-term residential facility, her children are highly likely to have been living in poverty and to have been exposed to an array of other risks.

Each of these risks has been shown to be related to negative outcomes for children. However, more important than the impact of these risk factors individually, is the accumulation of these factors in the life of a child. There is ample evidence to suggest that for most children, a single risk factor will not result in a major developmental problem. Rather, it is the buildup of risk factors that poses the greatest threat to the child. In one of the earliest studies of the effects of cumulative risk, Rutter (13) examined six risk factors (severe marital distress, low socioeconomic status (SES), paternal criminality, large family size/overcrowding, maternal mental illness, and child placement in foster care) and their relation to psychiatric disorders in 10-year-old children. He found that only 2% of children in families with zero or one risk factor exhibited psychiatric problems, compared with 20% of children in families with four or more risks. Similarly, results from the Rochester Longitudinal study suggest that high numbers of environmental risks (maternal mental illness and anxiety, rigidity in parenting attitudes, few positive maternal interactions, unskilled occupation, low education, minority status, single parenthood, stressful life events, and large family size) are related to lower IQ scores and increased socioemotional problems in four-year-old children. Each risk factor resulted in an average four point drop in the child's IQ, and children with no environmental risks scored more than 30 points higher than children with eight or nine risk factors (14). Likewise, results from the Canadian National Longitudinal Study of Children and Youth showed that children of ages 6–10 years old exposed to four or more risk factors have a rate of behavioral problems that is five times higher than for children without multiple risks (15). These results are of particular concern considering that of the eleven risk factors assessed in the present study, the mean number experienced by children of mothers with addictions was 6.5. Only 4% of children were exposed to fewer than four risk factors.

In one of the few studies addressing both the effects of cumulative environmental risk and prenatal substance exposure on young children's development, Carta and others (16) followed 278 infants, toddlers, and preschool children, and periodically tested their general development. A cumulative environmental risk index was created by summing five factors (low income, single parent with no caregiving support, family size >5, caregiver did not complete high school, minority status). They found that while both prenatal drug exposure and cumulative environmental risk predicted children's developmental level and rate of growth, environmental



risk accounted for more variance in developmental trajectories than prenatal drug exposure. Over time, the effects of environmental risk outweighed the adverse consequences of prenatal substance exposure. Their findings confirm the importance of examining the range of risk factors in children's environments that are associated with maternal substance abuse.

In addition to high levels of exposure to risks, another challenging aspect of the lives of these children is that they appear to have limited opportunities to develop the kinds of skills and relationships that might serve as buffers against risk. Given the instability in their lives, there is a decreased likelihood that they will be able to acquire good skills for emotional regulation and social interaction, to form stable and supportive relationships with caring adults, and to access the kinds of consistent stimulating encounters that facilitate knowledge and bolster achievement. In effect, it is less likely that they will develop the kinds of personal assets needed to protect them against the risk conditions they face (17).

These data also highlight the intergenerational nature of substance abuse and related problems. A substantial fraction of this group of mothers came from homes where substance abuse, family conflict, and physical and/or sexual abuse were common. Their children appear to be reliving their mothers' childhood experiences, and, without intervention, there is little reason to believe that this group of children will be able to avoid the problems that their mothers faced.

For those working in child protective services, these data also have important implications. More than half of the families involved in this study had been involved with the child protective services system, and many of the children had been removed from the care of their mother. When children are removed from their mother's care, these data suggest that relative placement options should be carefully scrutinized. Both fathers and grandparents frequently manifest problems of their own (histories of addiction, abuse and neglect of their own children) that may limit their ability to provide a supportive home for a child.

Although the children in this study face multiple challenges, the limited data on school-age children suggests that not all are succumbing fully to the risks. The majority had not experienced school failure, although 18% were not in the right grade for their age, and a quarter of children exhibited behavior problems in school. The prevalence of certain physical conditions (asthma, hearing, and vision problems) was somewhat higher in this sample of children compared with children nationally. This finding is not unexpected, given the number of children in this sample living in poverty (not to mention the biological risks of prenatal exposure to cigarettes, alcohol, and other drugs). Cross-sectional studies have shown that impoverished children are more likely to suffer from a variety of health problems,

including conditions like asthma and poor vision (18). However, the percentage of children experiencing most other physical and mental health conditions was not extraordinarily high.

These findings highlight the need for supportive services for children impacted by maternal addiction. Programs are needed to address the full array of immediate, transitional, and long-term needs of these children as individuals or members of a family. Unfortunately, programs designed for women with AOD disorders rarely include comprehensive services for their children. While a select number of programs currently offer a safe haven for these children during their mothers' stay in treatment, results from a review of 36 specialized substance abuse treatment programs for women and their children indicate many programs were unable to provide the full range of services needed (19). Adapting a program to adequately address the needs of both mother and child is no small task and requires support from well-trained staff, as well as a substantial financial commitment. Treating the complex needs of children requires a team of professionals that extends well beyond the kind of team found in a traditional AOD treatment setting. While challenging, providing intervention to these children is a critical task.

LIMITATIONS

This study addresses the life experiences of children whose mothers have an addiction severe enough to warrant placement in a long-term residential treatment facility. The experiences of these children may well differ from children of parents with lower levels of drug use or whose addiction would require a less intensive form of treatment. While homogeneous in terms of addiction severity, the mothers are diverse in ethnicity, geography, and in drug of choice. The extent to which such differences may impact children's life experiences or outcomes warrants investigation and represents an important area for future research.

An important limitation of this study is that all data were based on the mother's report. Not only were mothers asked to report information about themselves and their children, they also were asked for information about their parents and their children's fathers. While it may have been preferable to corroborate certain information (such as information about drug use or criminal behavior), it was not practical to do so. While there always are concerns about self-reporting when sensitive subjects are involved, these concerns may be somewhat lessened in the present study given that the women were already admitted to substance abuse treatment facilities when they were interviewed. There may have been fewer reasons for them to deny certain illegal or socially unacceptable behaviors.



Beyond the general shortcomings associated with self-report, there is the concern that the nature of alcohol and drug abuse further reduces the mother's ability to report accurately. In particular, data on child physical health problems should be interpreted with caution. If such a condition were diagnosed while the child was in the care of someone other than the mother, it is quite possible the mother would not be fully aware of the condition and could not report it at intake into treatment. Given the chaos surrounding these children's lives, it is likely that many of these children did not receive the kind of stable, regular medical care that would make it likely that any serious condition would be diagnosed. It also is possible that some mothers could have reported conditions that they suspected existed but were not confirmed by a doctor or mental health professional.

Finally, we have made comparisons between the prevalence rates of health problems and risk factors in this sample of children and children nationally. However, such comparisons are difficult to make. National estimates of problems of this nature vary depending on the data collection method and the age group surveyed. We tried to minimize these problems by using national survey data obtained in a similar manner when available (e.g., parents responding to a checklist of possible problems experienced by their child) and by ensuring that the age group surveyed was comparable. However, given the wide age range of children in this sample, the age ranges in the national samples were not a precise match.

In spite of these limitations, the implications of this study are immense. The convergence of reports from this large sample of otherwise diverse families presents a consistent picture of children with few supports and many risks. These findings represent an important step in providing policy makers with the necessary information to make informed decisions about the treatment needs of this at-risk group of children.

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