PRENATAL EXPOSURE TO DRUGS/ALCOHOL

ABOUT THE AUTHOR

Jeanette M. Soby's educational background includes a BA in Psychology and a MS in Education from Portland State University in Portland, Oregon.

Her professional career in education began in 1970, working with children diagnosed as schizophrenic and autistic. Later positions included teaching and academic evaluation of youngsters, from all grades, with the full spectrum of learning disabilities found in public school students. She conducts workshops for school districts, and courses on prenatal exposure to drugs and alcohol, through various universities, for educators and specialists working with this population.

Jeanette M. Soby has served as a Citizen Review Board (CRB) Chair for the Oregon Supreme Court, reviewing cases of children who have been removed from their biological families. This service on the CRB has provided her with experience in the social and community problems related to substance abuse.

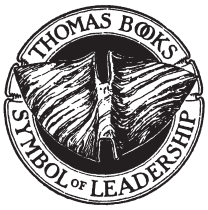
Second Edition

PRENATAL EXPOSURE TO DRUGS/ALCOHOL

Characteristics and Educational Implications of Fetal Alcohol Syndrome and Cocaine/Polydrug Effects

By

JEANETTE M. SOBY



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PREFACE

This book describes the characteristics of youngsters effected by prenatal drug/alcohol exposure and explores strategies to circumvent this damage, maximizing the individual's remaining strengths. Information and suggestions are primarily for the professionals in education who can provide supportive coordination for caregivers, mental health, and medical service providers; in terms of relaying information and pinpointing techniques for learning that are the most successful for each youngster.

Medical literature on the physical, cognitive, and behavioral characteristics of this population is described for readers without a medical background. Terminology commonly used by various disciplines, outside of education, is included generally as background to the continued investigations that this text hopefully inspires. Research related to aspects of learning, particularly relevant to deficiencies seen in this population, is included to provide the background necessary for the development of individual instructional strategies that cover the needs of both severely effected and moderately effected individuals. Discoveries about the organization and development of normal memory/learning have been brought together from the disciplines of education, biology, sociology, speech, cognitive psychology, and the neurosciences. The combined strength of various disciplines help us take into consideration the child's total environment, prenatal and postnatal.

Scientific knowledge is advancing rapidly with technology adding to the velocity, new findings add to and integrate with older research or inspire new ways for us to understand. For example, early research found prenatal cocaine more damaging, based on studies that often did not rule out other drugs that can cause birth defects, teratogens, such as tobacco and alcohol.

A sampling of relevant studies are referenced as support and information detail. The combination of risk factors in the substance-abusing population have made it difficult for researchers to determine specific independent effects of prenatal exposure to a single drug, or a single event.

Advances in technology are opening windows previously unavailable, allowing researchers to see mental operations of the brain as it learns and remembers. Neuroimaging that locates which areas of the brain are damaged can more accurately influence our expectations for a youngster, while pointing to instructional strategies and adaptations. Neurophysiology, neurochemistry, and neuropsychology inform the field of behavioral teratology. Understanding the biology of learning provides us a foundation to inform current and future education. While neurologists are studying the location and functioning of the learning brain–educators are looking at what activities produce the fastest, most stable, long-term learning.

However, we must look at research as tentative knowledge that points to ways of looking at, of understanding; a beginning step toward remediation design. Yet, the definitive statements we want from research are, only directions–qualified directions.

Children damaged from prenatal exposure to drugs/alcohol have been in the classroom all along, with teachers providing them an education. This text looks to educators who have found successful instructional techniques for use with students exhibiting many of the same physical, intellectual, and behavioral characteristics as students with effects from prenatal exposure to alcohol or cocaine/polydrugs. Educational needs, successful learning environments, and instructional techniques are addressed. Yet, despite medical, educational, and social support, most children with brain damage caused by prenatal alcohol exposure retain their handicaps throughout life. Thus, the environment must be adapted to optimize the experiences of these youngsters, because brain damage has removed much of their flexibility to use cognitive strategies.

I've included theoretical positions regarding cognitive processes that relate to the practical demands of instruction and successful skill acquisition. Unavoidably, the theoretical interpretations and topics presented dealing with learning are biased by my experience. I have made an effort to keep some reasonably concise parameters on the aspects of learning and instructional strategies that fit the range of

needs presented by youngsters damaged from prenatal drug exposure.

Research and experience have provided such an extensive base of information I'm sure my indebtedness to some sources will go unacknowledged. Articles I have read and conversations that became so much a part of me, I no longer recognize an idea is not my own. I weave together medical research on maternal drug use and subsequent child health, with cognitive research focused on learning to inform remedial instructional possibilities. Areas of concern are touched on: attachment, infant-stimulation, communication, the cognitive processes involved in learning, instructional techniques, learning environments. Questions brought up during my lectures are included in this edition.

Some information is included as a reference point to where inquiry is headed. Whereas, many studies have been done on prenatal exposure to alcohol, after doctors David Smith and Kenneth Jones published in 1973, studies of other prenatal drug exposures, such as marijuana, are not as abundant. Why? Maybe funding has not been available, maybe there is limited interest in the answer, or damage is not considered significant enough to study.

Youngsters born with drug effects resulting from maternal use of alcohol have a medical diagnostic label. At a summit hosted by the National Organization of Fetal Alcohol Syndrome (NOFAS), April 2004, a consensus statement regarding diagnostic terminology was made "Fetal Alcohol Spectrum Disorders (FASD) is an umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. These effects may include physical, mental, behavioral, and/or learning disabilities with possible lifelong implications for problems in many areas of life: work, school, and social relations. The term FASD is not intended for use as a clinical diagnosis" (www.nofas.org). The umbrella term FASD will be used to represent Fetal Alcohol Syndrome (FAS), Partial FAS, Fetal Alcohol Effects (FAE), prenatal alcohol effects (PAE), alcohol-related birth defects (ARBD), alcohol-related neurodevelopmental disorder (ARND), and alcohol exposed static encephalopathy, throughout this book.

Diagnostic labels describing specific characteristics of impairments have not been attached to other drugs such as cocaine, heroine, marijuana, or other newer "designer drugs." The primary focus of the medical research included here is on alcohol and cocaine. Addictive mater-

nal behavior for drugs other than alcohol often involves polysubstance abuse, use of a variety of drugs. Although not a medical diagnosis, the term *Fetal Drug Effects* (FDE) will be used to describe youngsters manifesting possible drug effects from prenatal cocaine and polydrug exposure, with cocaine the primary drug used, except when references to effects from a specific drug need to be delineated.

Looking at prenatal fetal cocaine/polydrug exposure, the consistent theme emerging is a correlation with subtle decrements in measures of cognitive development; sustained attention, arousal, and regulation of responses to stress. The popular media predictions of catastrophic life outcomes and effects on offspring in the late 1980s failed to evaluate the physiologic research results in light of maternal-fetal health problems and psychosocial risks that can accompany severe addictions to alcohol, cocaine, tobacco, and other drugs. The cumulative risk of disadvantaged social and environmental circumstances, compound biological frailties. This confluence of events contribute to an infant's poorer functioning; inadequate parenting, social isolation, maltreatment, domestic violence, and poverty.

The book falls into three sections. Part one presents the characteristics of youngsters prenatally drug exposed, giving the reader an understanding of possible damage. Part two presents background on the cognitive processes involved in learning. The primary focus of this section is on normal learning processes. Understanding normal cognitive processes allows the reader to extrapolate based on how a specific youngster is functioning. Part three describes instructional strategies, for the learning and everyday life experiences youngsters with disabilities find challenging.

In addition to medical and education research, information came from my work with families, community services, the judicial system, and education services. Experiences were derived from my work in the field of special education, from my service on the Citizen Review Board for the Oregon Justice Department, and from interviews with medical foster moms, teachers, social workers, nurses, other service and care providers, together with parents. I have also used experiences from professionals in the field who attended my course on prenatal exposure to drugs and alcohol. Working with the Juvenile Justice System and the Children Service Division, I reviewed placement and services for youngsters removed from their homes. Paternal substance abuse is frequently involved when children are removed from their

homes due to neglect, physical abuse, and sexual abuse.

Interviews with Chris Amos, Joan Marguis, Robin Lindsley, Billie McKenzie, and Beth Caruso provide examples of successful instructional and management techniques. Interviewees included a social worker, a nurse, a school psychologist, and teachers employed in the Portland Public Schools, a small city community with an urban population enrollment of fifty-six thousand students.

Additional descriptions of hands-on experiences came from interviews with medical foster moms working with the Children's Services Division in Portland, Oregon. Some of the most down-to-earth heartfelt information came from interviews with medical foster moms, the moms that take medically high-risk drug effected newborns home from the hospital. Many of the moms' I talked to had histories devoted to child care, their own children, adopted children, and foster care children.

All the adults I interviewed report recognizing the need for them to consistently present a calm demeanor, and to make a conscious effort not to take the difficult behavior of these youngsters personally. Behavior that from a nonneurologically damaged youngster would mean malicious intent. Keeping a calm atmosphere was found to be a successful instruction/behavior management technique. All of the people interviewed had to continually work at accepting the youngsters' lack of social judgment.

Parents and educators need to recognize deficits primarily so that strategies can be found to circumvent these deficits. Instructional and management recommendations are made with this in mind.

J.M.S.

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PART I

Chapter 1

INTRODUCTION: WHAT IS THE PROBLEM?

Polydrug use, taking more than one drug, is typical for chemically addicted mothers. Commonly abused drugs during pregnancy include: alcohol, a depressant; marijuana, that overstimulates the sensory nerves of touch, taste, sight, and hearing; amphetamine, that stimulates; heroin that produces euphoria; morphine that produces euphoria; and cocaine that produces euphoria. A problem that is significant to both the offspring and society.

This chapter discusses risk and causal factors; the need for identification and multilevel intervention. Research cautions are presented, giving the reader a broader perspective to evaluate the research this book is based on, and the additional research sparked by interest.

INCIDENTS

The most widely used prevalence estimate of FAS, in the general United States population, is 1 to 1.5 cases per 100 live births. Also, mortality is about two thousand infant deaths in the U.S. from FAS and related disorders (Burd, Cotsonas-Hassler, Martsolf, and Kerbeshian 2003). In addition, the Centers of Disease Control (CDC) (2000), found about thirty percent of the women who knew they were pregnant, reported alcohol consumption. Youngsters who have not been diagnosed have not been counted. Maternal substance abuse crosses all social levels, however, doctors frequently do not look for subtle signs of alcohol or cocaine exposure in babies born full term that appear healthy. Thus, rates may be low. Incidences of FASD for

different ethnic groups derived from the Birth Defects Monitoring Program of the CDC show Native Americans are at the highest risk with 29.9 per 10,000 births, varying with different tribes (Chavez, Cordero, and Becerra 1989). These figures reflect American Indians may be physiologically predisposed to alcoholism because of deficits in the ability to metabolize acetaldehyde, a product of alcohol degradation. This may add to the misperception that American Indians drink more alcohol (only 42% of adult Navajo Indians drink alcohol) than other ethnic groups (Carney and Chermak 1991).

Medically needy babies require longer hospital stays with increased overall hospital costs. The additional medical costs for drug/alcohol exposed newborns, at the national level have been estimated in the billions. These cost estimates do not include the lifespan support resources needed. For example, the medical foster parents and extended families who care for these children need respite care and parent training. The financial and profound social costs of this problem demand public health involvement in prevention, drug treatment, prenatal care, and educational services.

A recurrent theme stated by medical, judicial, and educational professionals providing services to youngsters is that "kids are different now than they were ten years ago." Drug use changes people, changes society. Today's problems are different; thus, solutions must be different. No matter how dedicated teachers are, how good schools are, a great education *is not as good as a bad family.* The families' impact is paramount. During a discussion of these concerns with medical and education providers, a prekindergarten teacher's sincere remark captured the fears, compassion, and hopelessness this social problem evokes, "At the end of the school day when I have two or three children who do not want to leave, it's scary to me." What kind of home are these youngsters avoiding? The life experiences some of these youngsters are exposed to suggest that a safe home is an anomaly rather than the norm. Teachers work hard to provide safety, structure, and control during school hours; then many students go home to chaotic environments. Children prenatally exposed to drugs/alcohol may have had lots of adults coming in and out of their lives: parents, relatives, foster care, and a variety of service providers. They may not ever have had a stable adult in their life.

> At the end of the school day when I have two or three children who do not want to leave; it's scary to me (pre-kindergarten teacher).

ADDICTION LIFESTYLE–RISK FACTORS

These children can be impacted by a group of risk factors: chaotic lifestyle, violence, abuse, neglect, being raised by brothers and sisters who are children themselves, and multiple placements with relatives or foster care. The parent-child relationships of youngsters living with parents expose them to the maternal personality disorders that flourish with drug use. Disruption and chaos describe the households of chemically addicted parents who have a commitment to chemicals, not to their children. As addiction worsens, the procurement of drugs becomes consuming; substances of abuse take precedent over all other considerations, including maternal and fetal health, nothing but the drug has any significance (Gawin 1991; MacGregor, Do, Keith, Bachicha, and Chasnoff 1989). ". . . Addictive drugs not only modify behavior but the brain itself . . ." (Restak 1988). Brain reward systems involved in the reinforcing effects of drugs of abuse promote drug use behavior, cocaine addicts report that all thoughts center on cocaine during binges. Disregard of the child's needs, neglect and abuse, follow parental addiction. These addicted, hopeless, scared mothers under the influence of mind-altering drugs, need care themselves.

Adult lifestyle is intimately tied to child development and familial relationships. How will the alcohol or cocaine addicted mother be able to take care of an addicted baby that is likely to have ongoing medical and educational needs? Can the alcoholic mother provide a safe and nurturing home for the child with FASD? When getting high is of prime importance, can a drug addicted mother, living in a chaotic drug environment care for and cope with the frustrations of an inconsolable infant with shakes and a sharp piercing cry? Will this mother be alert to the medical needs of a fragile infant? Inconsistent and intermittent nurturing may come from parents or caregivers who are emotionally needy themselves.