

EXPLORING THE LINK BETWEEN FETAL ALCOHOL SYNDROME AND SOCIOPATHIC BEHAVIOR

Shawna Cleary and Katherine Freeman
University of Central Oklahoma

INTRODUCTION AND BACKGROUND

Ever since Cesare Lombroso became fascinated with the origins of criminal behavior in the 19th century, sociologists, psychologists, and the public in general have been searching for answers to the eternal question "where do criminals come from?" Lombroso, regarded as the "father of criminology," fervently believed that criminal behavior was largely determined by physiological predisposition. This was confirmed by his post-mortem studies on criminals, during which he found depressions similar to those of rodents at the base of the criminal's skulls. Lombroso believed that skull depressions signified that criminals were born, not environmentally developed (Wilson 1989 177). There are many extant theories espousing biological factors as the cause for criminal behavior, the latest of which will be dealt with here. Fetal Alcohol Syndrome (FAS) was first identified in the early 1970's, and "...may be the leading cause of mental retardation in the United States" (Brown University Child Behavior and Developmental Letter 1991 3). FAS has grabbed the attention of the public, the media, and even a few accused criminals who seek to use it as a defense for their behavior. But does FAS cause criminal behavior in and of itself? Is it a factor in the development of criminal behavior, or just a red herring, having no real connection to criminal behavior, but nevertheless present in a criminal's biological makeup?

The FBI conducted an exhaustive search into the backgrounds of thirty six multiple murderers in order to determine whether there was a compelling set of factors that lead a person to commit violent criminal acts. They found that 60% of the offenders studied had a family history of alcohol problems (Ressler et al 1988 19). This finding brings to mind the possibility that those offenders who were offspring of alcoholics may themselves be afflicted with FAS or Fetal Alcohol Effect (FAE), a milder form of prenatal ethanol exposure. As such, these offenders may not have the capacity for understanding the nature of their crimes. Such was the case of Robert Alton Harris, a California man who was sentenced to death after he shot two teenaged boys to death while

robbing them of their car (which he intended to use in a bank robbery). Harris used FAS as a defense in his attempt to obtain a stay of execution, but was unsuccessful even though a judge in his case stated that Harris would not have received a death sentence had the court known he had FAS (Nightline 1992). Supposedly, Harris had a terrible childhood: he was sadistically abused by his parents, abandoned by them at age fourteen, and had brain damage caused by FAS. Nevertheless, Harris was executed in 1992. It is possible that the court acted in this case partly out of fear that if Harris were granted a stay, the case would open up the floodgates for others to use FAS to avoid punishment. Unfortunately, much more research needs to be done on FAS before it is accepted into the courtroom on a regular basis.

The characteristics generally attributed to FAS include the following: no concept of stealing, impulsive behavior, no memory, inability to use abstract thought, illogical reasoning, no understanding of consequences or rules, poor judgment, and mental retardation (Dorris 1989). FAS is an irreversible, lifelong condition brought about by the mother's alcohol intake during pregnancy. Those children suffering from FAS have similar distinctive physical attributes: short, extremely thin with distinctive facial features, and behavioral problems.

The diagnosis of FAS is made when there is a confirmation of a history of maternal alcohol abuse and when examination reveals that a child meets three criteria: (1) prenatal or postnatal growth retardation (height and weight below the 10th percentile when corrected for gestational age); (2) central nervous system (CNS) dysfunction (any of neurological abnormality developmental delay or intellectual impairment); and (3) characteristic craniofacial abnormalities, including at least two of the following three: microcephaly (head circumference below the third percentile), microphthalmia or short palpebral fissures, and poorly developed philtrum, thin upper lip and flattening of maxillary area. The term FAE is used when a child shows two, but not all three of the above indicators. (Conry 1990 650)

Alcohol also negatively affects the following skills: perceptual/motor skills, motor coordination, strength, reaction time, language skills, and attention (Conry 1990 650). The characteristic "FAS face" is recognized by: short eye openings, a thin upper lip, and an elongated, flattened midface and groove in the middle of the upper lip (NIAAA 1991 1). Diagnosed individuals with FAS have tested low in IQ's with a mean of 66, while those with FAE generally score a little higher with a mean of 73 (Streissguth et al 1991 1964).

BEHAVIORAL MANIFESTATIONS OF FAS/FAE

Ann Pytkowicz Streissguth and other researchers have noted that, commonly, FAS patients have the following characteristics:

...remarkably unstable home environments: they had lived, on average, in five different principle homes in their lifetimes (not counting receiving homes or temporary shelters). Only 9% were still with both biologic parents; only 3% were still with their biologic mothers. Of those for whom accurate data could be obtained, 69% of the biologic mothers were known to be dead. Although many died of alcohol-related illnesses, others died of other alcohol-related causes such as suicide, homicide, falls, and automobile accidents. Nearly one-third of these patients with FAS-FAE were never raised by their biologic mothers; they were given up for adoption at birth or abandoned in the hospital. (1991 1965)

It is evident from these findings that there is a strong sociological implication in the FAS problem that is larger than just the biology of alcohol addiction. The families of these people are inordinately dysfunctional, a factor which must be addressed as well. In other words, if the extant research is to be believed, FAS children primarily come from extremely dysfunctional families where they would have adjustment problems regardless of their individual genetic makeups. Commenting on the compounding effect of environmental factors, law professor Alexander Morgan Capron offered the following:

What needs to be understood is that fetal alcohol syndrome creates something like a lump of unusually pliable clay out of which many things can be formed. The damage to the brain and especially to the pathways that seem to allow reasoning about relationships and

consequences may well be irreversible, but the environment in which these children are raised and taught is certainly not immutable. Regrettably, without adequate societal intervention, many of them will face environments that are chaotic or nonsupportive, though few, one hopes, will have childhoods marked by the sort of overwhelming, abominable parental brutality and neglect that Robert Harris suffered. (1992 29)

Capron (1992 29) also points out that FAS people seem more rational and less delusional than the classically mentally ill, and their mental retardation is different from the classically mentally retarded also. He considers those with FAS to be rather sweet, pleasing, and dependent people who are at risk for criminal behavior not so much because of their willfulness, but because of their desire to please coupled with bad judgment and inability to learn from experience. Additionally, those with FAS do not have the capacity to comprehend laws and conform to them.

FAS/FAE children and adolescents are reported to have behavioral disorders. In a 1991 study which used the Veneland Adaptive Behavior Scale (VABS) adolescents from the FAS-FAE group had an average level of adjustable functioning around 7 years, although the chronological age was 17 years old (Streissguth et al 1991 1964). These individuals performed best on the daily living skills scale and worst on the socialization skills scale (Streissguth et al 1991 1965). The individuals with FAS/FAE whose scores on the Wechsler adult intelligence scale rated them not retarded exhibited the following characteristics: failure to consider consequences of their actions, lack of appropriate initiative, unresponsiveness to subtle social cues, and lack of reciprocal friendships (Streissguth et al 1991 1964). The most frequent types of maladaptive behavior exhibited were poor concentration and attention, dependency, stubbornness or sullenness, social withdrawal, teasing or bullying, crying or laughing too easily in public, and periods of high anxiety, as well as lying, stealing, cheating, or showing a lack of consideration, and exhibiting excessive unhappiness (Streissguth et al 1991 1965).

The behavioral aspects of FAS/FAE children could be explained in part by the dosage hypothesis. The dosage hypothesis states that (1) behavior deficits associated with social or light drinking mothers are similar to, but of small magnitude when compared with the

behavioral deficits found in the "damaged" children of chronically alcoholic mothers, (2) the behavioral deficits associated with maternal alcohol use have the same cause as the physical defects, and (3) risk of severity of symptoms is directly proportional to the average daily consumption of alcohol during pregnancy (Lenzer et al 1982 905).

THE LINK TO SOCIOPATHIC BEHAVIORS

The term "sociopath" used to describe persons with criminal, but not psychotic personalities was coined by G.E. Partridge in the 1930's (Bartol, Bartol 1986). In the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM) sociopath became officially Sociopathic Personality Disturbance. And in 1968 the DSM-II redefined it as Antisocial Personality Disorder (APD) which was retained in the DSM-III (1980) and DSM-III-R (1987). An individual must be at least 18 years old to be diagnosed APD; when under 18 they are labeled with Conduct Disorder (CD). To fit DSM-III-R diagnosis for APD an individual must have a history of 3 or more of 12 criteria behaviors: 1) truancy, 2) running away from home, 3) physical fights, 4) weapons in fights, 5) forced sexual activity, 6) physical cruelty to animals, 7) physical cruelty to others, 8) destroying others' property, 9) fire starting, 10) lying often, 11) stealing without confrontation, and 12) stealing with confrontation. The individual must exhibit 4 of the 10 following behaviors since the age of 15: 1) inconsistent work or academic behavior, 2) repeated unlawful behavior, 3) irritable, aggressive and assaultive, 4) failure to honor financial obligations, 5) transient or impulsive travel, 6) no regard for trust, 7) reckless disregard for safety of self and others, 8) irresponsible parenting, 9) no monogamous relationships for more than a year, and 10) lack of remorse. The antisocial behavior cannot occur exclusively during the course of manic or schizophrenic episodes (American Psychiatric Association 1987).

The largest category of psychiatric disorders for adolescents is conduct disorder, defined by DSM as a

repetitive and persistent pattern of conduct (lasting a month or longer) in which either the basic rights of others or major age appropriate societal norms or rules are violated. (Holcomb, Kashani 1991 579)

Research has indicated that antisocial behavior patterns can be well established by 10 years of age and high levels of antisocial behaviors are likely to continue into adolescence and adulthood (Holcomb, Kashani 1991 579). Children with conduct disorder show a tendency toward learning problems and lower verbal and language skills (Holcomb, Kashani 1991 580).

An interesting aspect regarding alcohol and criminal behavior is that some studies link alcoholism and antisocial personality disorder (APD). Lewis and Bucholz (1991 177) state that persons with APD are reported as having a higher incidence of alcoholism than those without APD. Additionally, the same authors state that there has been a close association noted between criminality and alcoholism; in fact, many convicted criminals are alcohol abusers, and many alcoholics engage in criminal activity. Also, it has been shown that a family history of alcoholism increased an individual's risk of alcoholism. Lewis and Bucholz suggest the following conclusion:

Thus, individuals with early onset and persistent antisocial behavior (sociopathy, psychopathy, or antisocial personality) frequently have alcohol abuse as a part of their behavior disorder and also frequently become involved with the criminal justice system. However, the association of alcoholism and antisocial behavior observed in subjects obtained from the criminal justice system may reflect the fact that drinking near the time of committing a criminal offense may increase the likelihood of apprehension. (1991 178)

Lewis and Bucholz (1991 178) also report a recent study that showed "alcoholics were 21 times more likely to have ASP (APD) than non-alcoholics and 7.2 times more likely to have a drug use disorder." They state additionally that "...alcoholism was significantly associated with phobic disorder, antisocial features, and generalized anxiety disorder in both men and women" (Lewis, Bucholz 1991 186). Their studies also found that "...childhood antisocial behavior was predictive of adult alcoholism" (Lewis, Bucholz 1991 188).

Another interesting finding reported by Lewis and Bucholz is that both APD and conduct disorder are more closely associated with alcoholism than a family problem drinking history, and are more closely associated with women than with men (Lewis, Bucholz 1991

192). Therefore, a link between criminal behavior that is antisocial in nature (which all or most criminal behavior is) and alcoholism has been established while specific intentional criminal behavior in those with FAS has not been established.

On the other hand, Lenzer et al hypothesized that

...other children without the range of symptoms necessary for this diagnosis, (FAS) are very probably also suffering from prenatal exposure to alcohol. Prospective studies have shown that certain behavioral and growth abnormalities result from maternal intake of alcohol during pregnancy, even in the absence of definitive facial and other malformations. (1982 903)

The authors also hypothesize that nutritional factors have a relation to the development of FAS, and a milder form of FAS may come about solely because of nutritional deficits caused by alcohol and/or impaired behavior due to withdrawal from alcohol (Lenzer et al 1982 904).

Further, a link has been shown between conduct disorder (CD) children and parents diagnosed with APD, alcoholism, or hysteria. As defined by the DSM-III-R, a diagnosis of conduct disorder requires at least three of the following behaviors within the previous six months:

1. has stolen without confrontation of a victim on more than one occasion
 2. has run away from home overnight at least twice while living in parental or parental surrogate home
 3. often lies
 4. has deliberately engaged in fire-setting
 5. is often truant from school (or absent from work)
 6. has broken into someone else's house, building, or car
 7. has deliberately destroyed other's property
 8. has been physically cruel to animals
 9. has forced someone into sexual activity with him or her
 10. has used a weapon in more than one fight
 11. often initiates physical fights
 12. has stolen with confrontation of a victim
 13. has been physically cruel to people
- (DSM-III-R, 1987 58)

Conduct disorder (CD) is the diagnosis given to the youths under the age of eighteen

who may have many of the personality characteristics of APD; and to adults who are behaviorally disturbed, but not to APD extent. It can be assumed that children with CD will likely move into APD as they get older if they are not involved in treatment. Lahey et al's (1987 163) findings on the origins of CD in children and the link to alcohol form an important causation hypothesis for criminal behavior. If children diagnosed with CD have fathers who are alcoholic APD'S, it will be comparable to having a behavioral flag for counselors, etc., who will have to treat that child. If they can assume the link between father's APD and child's CD, the counselors will be able to apply proper counseling techniques and possibly head off future criminal behavior. It is also interesting that this link between criminal behavior from father to son seems to be genetic.

Individuals with conduct disorders have a difficult temperament, poor moral judgment, sensation seeking behaviors, and are impulsive. Their interpersonal relationships are hostile and they exhibit verbally aggressive responses in conflict situations, as well as little empathic ability. They have deficits in language development and language use, poor school performance and increased grade repetitions, as well as an increase in reading retardation (Werry et al 1987 136). The parents and families of individuals with conduct disorder use inconsistent, punitive, or harsh discipline and give inadequate supervision. Additionally, these families show explosive expression of anger, as well as criminal behaviors (Werry et al 1987 361).

Research has indicated two types of family risk factors that are linked to childhood conduct disorder, parental psychopathology and parenting behavior (Frick et al 1992 49). High rates of antisocial personality disorder, substance abuse and maternal depression have been consistent in the parents of adolescents with conduct disorder (Frick 1992 49). Mothers of children with CD are more likely to exhibit APD, as well as criminal behavior and a high rate of diagnosed hysteria (Lahey et al 1989 512). Children with CD had mothers who were significantly more likely than mothers of control children (non-CD) to be poor at supervising their child's behavior and inconsistent when applying discipline (Frick 1992 54). Additional research indicated that children of fathers who were sociopathic or alcoholic were found to be more likely to exhibit severe CD than children of fathers without these

Table 1: A Comparison of APD and FAS-FAE

APD	FAS-FAE
usually bright	usually mentally retarded
fails to conform to social norms	does not comprehend social norms
is aggressive	is not willfully aggressive
is impulsive	is impulsive
lies with understanding	lies without understanding
has good understanding of the rules, but does not want to play by them	no concept of rules
no obvious physical attributes	specific facial features
behavior problems	behavior problems

disorders (Lahey et al 1988 163). The fathers of children with CD were more likely to be diagnosed APD and were more likely to exhibit either alcoholism or APD (Lahey et al 1988 163). Children with CD are more likely to have both mothers and fathers who qualify for the diagnosis of APD, as well as fathers who abuse substances (Lahey 1988 167). CD children who exhibited the greatest amount of physical aggression and other law breaking behavior had fathers who were more likely to exhibit the same kind of antisocial behavior (Lahey et al 1988 168). It is likely that a specific pattern of aggressive and law breaking behavior is passed from father to child (Lahey et al 1988 169).

CONCLUSION

So far, there has been no proven link between APD and FAS-FAE regarding the causation of intentional criminal behavior. There is, however, a link between fathers with APD and alcoholism and children with CD. The problem with trying to link FAS and crime lies in the frequency of mental retardation associated with FAS (and FAE). In this respect, saying there is a link between intentional criminal behavior and FAS is comparable to believing a paranoid schizophrenic or someone who is mentally retarded is able to form intent. Historically, one of the marks of a civilized nation is that it requires the formation of two things for an act to be considered a crime—*mens rea* and *actus rea*. A mentally ill or mentally retarded person is considered by civilized society to be unable to form intent and as such is treated differently by the criminal justice system than the person judged intelligent and sane, who is able to form intent. One of the problems with criminal behavior and FAS theory is that mental retardation is so

prevalent in FAS; contrary to popular opinion it is not the mentally retarded who generally fill the prisons of the U.S., but the APD's who are at least marginally intelligent, and sometimes quite brilliant. Therefore, a separation must be made between popular opinion and fact.

The most important findings as to the link between alcohol and criminal behavior are Lahey et al's (1989) findings which link CD in children to APD and alcoholism in their parents. In this respect, it would be good to define a new term to go along with FAS and FAE which pertains to a fetal alcohol effect without mental retardation as such. Much research still needs to be done in the area of parents' drug abuse and the effect it has on their children. Such research should not only focus on the mother's alcohol and other drug behavior during pregnancy, but should also focus on the father's alcohol and drug behavior prior to conception. If we as a society know where our criminals are coming from, we owe it to ourselves to attempt an intervention. Although people suffering from FAS and FAE should not be allowed to commit crimes, we as a society must determine to treat them as we would other mentally retarded people (granted FAS retardation is somewhat different from "classic" retardation). Nevertheless, we must find an equitable way for our criminal justice system to treat the thousands of FAS and FAE people who will be coming into the system. And while a Not Guilty By Reason of Insanity verdict may be an inappropriate method of dealing with FAS offenders, we must find some sort of solution before we are inundated with more FAS-FAE offenders, as well as the ever expanding crop of crack babies.

The association between FAS-FAE individuals with antisocial personality disorder is multifaceted in that there are many dependent

variables that come into play with these children, illustrated here by Table 1's comparison of FAS-FAE and sociopathy. Much more research is needed before a definitive statement can be made concerning the degree to which FAS-FAE contributes to antisocial personality disorder in adults. In the opinion of the authors, the greatest similarity appears to be not with the FAS children, but with the FAE children who have a higher I.Q. The true FAS child is in the I.Q. range of retarded, whereas a normal to high I.Q. is thought to be one of the characteristics for sociopathy (Sears 1991 43).

FAE children with normal I.Q.'s have been documented as having behaviors (lying, stealing, cheating, failure to consider consequences, no reciprocal friendships, etc.) that will easily fit the same criteria for APD (and conduct disorder at a very young age). But the greatest contributing variable that affects FAS-FAE children is the type of home environment in which they are raised. The inconsistent care, neglect, and abuse that can result for the children from alcohol and other drug using homes is well documented. The effects of this kind of environment on non drug/alcohol prenatally exposed children is a serious danger for proper development. When one adds the effects suffered by FAS-FAE children to the inconsistent, unstable, explosive, abusive, and neglectful home life with the chemically dependent parent, the consequences are grim indeed for the child and the likelihood of conduct disorder and antisocial personality disorder increase significantly.

REFERENCES

American Psychiatric Association 1952 *Diagnostic and Statistical Manual of Mental Disorders* Washington, D.C.: American Psychiatric Association

_____ 1968 *Diagnostic and Statistical Manual of Mental Disorders* 2nd ed., Washington, D.C.: American Psychiatric Association

_____ 1980 *Diagnostic and Statistical Manual of Mental Disorders* 3rd ed., Washington, D.C.: American Psychiatric Association

_____ 1987 *Diagnostic and Statistical Manual of Mental Disorders* 3rd ed.-Revised Washington, D.C.: American Psychiatric Association

Bartol CR, AM Bartol 1986 *Criminal Behavior: A Psychosocial Approach* Englewood Cliffs, New Jersey: Prentice-Hall

Brown University Child Behavior Development Letter 1991 FAS has lifelong negative effects, study says April 3

Capron AM 1992 Fetal alcohol and felony *Hastings Center Report* May-June 28-29

Conry J 1990 Neuropsychological deficits in fetal alcohol syndrome and fetal alcohol effects *Alcoholism: Clinical Experimental Res* vol 14 5 650-655

Dorris M 1989 *The Broken Chord* NY: Harper and Row

Frick PY, B Lahey, R Loeber, M Stouthamer-Loeber, MAG Christ, K Hanson 1992 Familial risk factors to oppositional defiant disorders and conduct disorder: parental psychopathology and maternal parenting *J Consult Clinical Psych* ???

Gittler J, M McPherson 1990 Prenatal substance abuse *Children Today* July-August 3-8

Holcomb WR, JH Kashani 1991 Personality characteristics of a community sample of adolescents with conduct disorders *Adolescence* vol 26 103 579-586

Lahey B, JC Piacentine, K McBurnett, P Stone, S Hardage, G Hynd 1989 Psychopathology in the parents of children with conduct disorder and hyperactivity *J Amer Acad Child Adoles Psychiatry* vol 27 2 163-169

Lenzer L, C Hourihan, C Ryan 1982 Relation between behavioral and physical abnormalities associated with prenatal exposure to alcohol: present speculations *Perceptual Motor Skill* 55 903-912

Lewis C, K Bucholz 1991 Alcoholism, anti-social behavior, and family history *J Addiction* 86 177-194

Nightline 1992 ABC News, April 15

National Institute on Alcohol Abuse and Alcoholism 1991 Fetal alcohol syndrome *Alcohol Alert* 13 July 1-3.

Ressler R, AP Burgess, DJ Douglas 1988 *Sexual Homicide Patterns and Motives* NY: Lexington Books

Sears J 1991 The motivation and development of serial murder *Scholarly Resource Imprint* Wilmington, Delaware

Streissguth A, JM Aase, SK Clarren, SP Randels, RA LaDue, DF Smith 1991 Fetal alcohol syndrome *J Amer Med Ass* vol 265 15 1961-1967

Werry JS, JC Reeves, GS Eikind 1987 Attention deficit, conduct oppositional and anxiety disorder in children: I. A review of research on differentiability characteristics *J Amer Acad Child Adoles Psychiatry* 133-141

Wilson C 1989 *Written in Blood the Criminal Mind and Method* NY: Warner Books