## **SHORT COMMUNICATION**

# Relationship between Fetal Alcohol Spectrum Disorder (FASD) and criminal justice

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## ABSTRACT

Prenatal alcohol exposure is one of the leading causes of preventable birth defects; nevertheless, it is also the leading cause of developmental delay worldwide. There is a strong link between Fetal Alcohol Spectrum Disease (FASD) and subsequent impairments. a link with criminal activity The goal of this systematic review is to provide current information. explores the interaction between FASD patients and the criminal justice system, examining several elements In A further purpose is to propose many ideas in light of the findings of this research to lessen FASD's financial impact on the general populace. According to the guidelines, a systematic review of the literature was done. Following the PRISMA rules, 20

publications were found to meet the inclusion criteria. Fetal Alcohol Syndrome (FAS) is a prominent cause of preventable birth problems and developmental abnormalities in neonates, according to the findings of the studies. Furthermore, some topics appear to be more interesting. When compared to others, they are more likely to do criminal crimes. Finally, it should be noted that FASD is characterized by a wide range of symptoms. Considerable public health expenses, both in terms of the assistance provided to the affected person as well as the financial and societal consequences of any criminal actions committed.

Key Words: Fetal Alcohol Spectrum Disease (FASD); Criminal behavior; Misbehavior; Biomarkers

## INTRODUCTION

ASD (Fetal Alcohol Spectrum Disorder) is a broad term that refers to a variety of neurological and behavioral issues that might afflict a child born to a mother who misused alcohol during pregnancy [1]. The percentage of women in each country correlates with the prevalence of FASD. Who consume alcohol when pregnant The prevalence of fetal alcohol syndrome is increasing globally. The prevalence of (FAS) in the general population is estimated to be 14.6 per 10,000. According to a recent study by Popova et al., the prevalence of FAS in the US is In the United States, the rate is 14.8 per 10,000, while in Canada, it is 10 [2]. FAS is more common in Eastern European nations with high alcohol consumption: 46.6 percent in Belarus, 36.5 percent in Russia, 34 percent in Ukraine, 32.7 percent in Bulgaria, and 32.3 percent in Lithuania. Moreover, Some European countries are in a similarly precarious situation: Denmark (60.4), Ireland (60.4). Italy (41.3), the United Kingdom (45.8), and the United States (45.8) (33.1). Australia has also registered similar data from throughout the world (35.6). FASD, on the other hand, is an uncommon condition in Middle Eastern countries, with prevalence rates far below 1 sick infant per 10,000 healthy ones, demonstrating the intimate link between this behavior and sickness. The countries that have Oman, the United Arab Emirates, Saudi Arabia, Qatar, and the United Arab Emirates have the lowest prevalence. Kuwait.

Prenatal alcohol exposure is one of the leading causes of preventable birth abnormalities, but it is also the leading cause of developmental delay worldwide [3].

Regarding the severity of the illness, early identification of FASD can enhance the patient's result, such as preventing secondary disabilities and assisting them in leading a near-normal life. FASD diagnostic indicators are based on different appraisals, even though diagnosing FASD is extremely challenging. intrauterine or postnatal growth deficit (less than average height and/or weight more than the tenth percentile); assessment of craniofacial dysmorphology (smooth philtrum, narrow chin); Examination of central nervous system injury (confirmed, unknown, or disconfirmed); evaluation of prenatal alcohol exposure (confirmed, unknown, or disconfirmed) [4]. Moreover, we strongly urge the use of a diagnostic algorithm for FASD, such as the one provided here. Cook et al., Furthermore, because the most important causes of FASD are linked to various

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social factors (for example, low-income or poorly integrated subjects are more vulnerable to FASD risks than non-FASD subjects), it is important to note that the most important causes of FASD are related to different social factors. That further research is needed to investigate the interactions across prisons in a systematic way risks, FASD, and a variety of social variables, including socioeconomic status

Subjects with FASD can surely benefit from coaching and support in everyday activities to find work and live freely. Unfortunately, most cases of FASD go undiagnosed, resulting in a delay in diagnosis [5]. It is well established that late support, as a result of a missed or delayed diagnosis, renders the effects of FASD irreversible. As a result, those who have had their central nervous systems damaged as a result of prenatal alcohol consumption will show symptoms. A wide spectrum of disabilities, ranging from social issues to, in the most severe situations, impairment of mobility the ability to make judgments and exercise self-determination, as well as the ability to assess the societal value of their work behavior, which is linked to antisocial and criminal behavior of varying severity. These FASD-related issues are classified as secondary impairments, which may or may not be permanent. Improved as a result of a variety of effective actions.

There is a strong link between persons with FASD and criminal offenses, especially among the so-called secondary disabilities. Indeed, it is thought that people with FASD are overrepresented in prisons: according to research conducted in the United States, 60 percent of adolescents and adults with FASD had been in difficulty with the law. The law, while a Swedish study yielded contradictory results. Furthermore, when looking at data for adult populations, the incidence of convicts with FASD was found to be quite high [6]. Decreases precipitously. It should be noted that FASD is associated with large public costs, both in terms of healthcare and the legal system. On the one hand, there are the costs of health-care measures to help the affected individuals and their families; on the other hand, there are the costs of research and development are both the costs of the trial and the costs of the illegal act's societal impact. In 2009, Canadian academics conducted a study that evaluated the annual expenditures associated with FASD is estimated to cost CAD 21,642 per person.

Any publications that matched the study keywords "FASD and criminal justice" were evaluated: All articles that looked at data regarding people with FASD who were involved in criminal conduct were included. Furthermore, the research was chosen based on the criteria of the published paper. During the review process, we included articles that used the terms FASD, Fetal Alcohol Syndrome (FAS), Partial FAS (pFAS) Alcohol-Related Neurodevelopmental Disorder (ARND, and Alcohol-Related Birth Defects (ARBD) based on prior international recommendations [4-7]. The research includes retrospective and interview-based studies. The following items were excluded: (1) reviews, (2) non-English articles, (3) editorials, (4) book chapters, and (5) conference communications. The following were the inclusion criteria: (1) original study, (2) case report, (3) English-language articles, and (4) in vivo research.

F.S. first assessed all of the publications, assessing the title, abstract, and entire text. M.S. then re-examined the items she had chosen on her own. The degree of agreement between the investigations was assessed using Kappa's statistical test, which yielded a high result of 0.85. Disagreements about eligibility were settled through a consensus process overseen by C.P [8].

This systematic review has several strengths, including the quantity and breadth of the research, which covers the world, the search technique, and a flowchart that details the study selection procedure. Furthermore, the concordance between researches gave Kappa's statistical test a good score. The relative terms that may have influenced the search strategy are related to the bias risks.

There were a total of 161 articles chosen. There were 36 duplicates deleted and 15 studies were eliminated because they did not meet the study's objectives. Thirty-two papers were eliminated from the study because they did not match the criteria for inclusion. After a thorough review of all 78 articles, 58 studies were found to be ineligible. The current systematic review includes 20 studies after the review processes.

Twelve investigations were conducted in Canada, three in Australia, two in the United States, and one each in New Zealand, Brazil, and Sweden after the data was analyzed.

When it comes to examining data from around the world, Canada is the country that has put the most effort into understanding the FAS problem. Indeed, several significant researches have been conducted that have advanced our understanding of this critical health issue. FAS is prevalent in various European countries, as indicated above, but only Sweden has released a scientific report on the subject. Strangely, nations such as Ireland, Denmark, The United Kingdom, and Italy have not released research on this topic; we believe that further studies will be needed shortly to analyze the European situation, country by country, and to suggest possible support activities. The most prevalent effects observed in subjects with FASD, according to Brown et al., were impulse control issues, executive function deficits, learning disabilities, adaptive functioning deficits, social skill deficits, and poor judgment. According to earlier research, early identification of FASD is linked to better outcomes, including less engagement with the Criminal Justice System (CJS). It's also worth noting that FASD has been linked to baby deaths from abrupt cardiac arrest [9].

From a forensic standpoint, two major issues arise the mother's legal responsibility in cases of FASD caused by alcohol intake during pregnancy and the importability of an FASD subject. Brown et al. indicated that when rationality is weakened by FASD, acts driven by intense emotion and desires may occur, implying that the obvious consequences for criminal liability should be minimized.

In this context, considering the mother's responsibility, the scientific community faces a challenge in identifying new molecular biomarkers to demonstrate prenatal exposure: in some countries, the mother is legally responsible if her newborn tests positive for abused substances. The issues surrounding a mother's responsibilities are quite specific to each country. In some parts of the United States, the mother may be charged with child abuse if she drinks while pregnant. As a result, the mother is imprisoned and the infant is removed from the mother's care shortly after birth. On the other hand, certain countries (such as Canada) do not recognize the fetus as a human until after birth. Furthermore, several programs to prevent alcohol intake during pregnancy should be implemented. Rasmussen et al. demonstrated how the First Steps program (modeled after the Parent-Child Assistance Program) improved outcomes for mothers at risk of giving birth to a child with FASD in Canada. Several efforts have been implemented in Australia, such as the presence of a court with the authority to order that the mother be put into care pending birth or to impose various conditions on behavior, to protect the life and

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health of unborn children. Furthermore, health institutions should create programs to assist health counseling on alcohol intake during pregnancy, particularly when giving care to women with poor levels of education, as previously stated.

From disrespectful behavior and arrest to the full adjudication process and incarceration, FASD is significant across the legal spectrum. For example, with FASD, brain damage may be a factor, lowering the individual's self-control and ability to recognize when his or her actions endanger others. After arrest, cognitive impairments may damage competency to go to trial by producing significant confusion regarding the implications of renouncing rights to quiet and legal representation before and during police questioning [9,10]. According to McMurtrie, in sex offense prosecutions, persons with FASD are treated differently by the criminal justice system depending on their role in the crime, whether they are victims or perpetrators. When deciding whether a victim can consent to sexual activity, the primary and secondary limitations associated with FASD are normally taken into account, but not when determining whether a defendant possessed the men's rea to engage in illegal sexual conduct. Courts and attorneys can benefit from a detailed medico-legal report created by practitioners with FASD experience to better comprehend the intricate interactions between brain injury, genetics, and the environment. Corrections and probation officers should be aware of the impact of FASD on an offender's capacity to understand and follow probation rules and instructions.

Based on the findings of this literature review, the failure to diagnose FASD on time may have major implications by denying these individuals the necessary support: they will be unable to lessen their difficulties in carrying out everyday activities, which may lead to misbehavior. It would be preferable to conduct timely neurodevelopmental assessments and provide appropriate care for FASD subjects to reduce the negative impacts of FASD. National health and judicial systems should investigate this phenomenon urgently: Without a doubt, early care for FASD patients may result in a decreased financial burden for both the public health and legal systems.

As previously stated, FASD status may be regarded as a risk factor for performing a criminal act; hence, support measures must be implemented to both prevent and avoid recidivism by these individuals. According to recent research, health professionals' support is critical in reducing alcohol use during pregnancy: teaching pregnant women about the detrimental consequences of alcohol consumption is a critical countermeasure to preventing FASD [10]. Finally, it is critical to provide legal assistance to all people with FASD who are involved in criminal activity. It must be overlooked that these individuals may face inequities at any step of the legal system, such as a lack of understanding of the circumstances at hand.

### CONCLUSION

Because of these factors, each country should do the following efforts, particularly if there is a high proportion of a FASD subject.

It is necessary, in our opinion:

- To implement specialized training for cops, judges, attorneys, and other stakeholders to better understand the complex FASD phenomena
- To form a multidisciplinary group to quickly identify people with FASD so that a fair trial can be conducted to

- form a multidisciplinary group to quickly identify subjects with FASD so that a fair trial can be conducted;
- To research to better determine the likely incidence of FASD in the jail population and to develop targeted support treatments in prison to reduce recidivism
- To initiate a follow-up program for all inmates who have been diagnosed with FASD

Finally, well-designed studies should be carried out on a country-by-country basis to provide an up-to-date status, allowing each government to implement new and helpful measures.

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