“He’s on the Streets, and Stealing, and Perpetuating the Cycle... and I’m Helpless”: Families’ Perspectives on Criminality in Adults Prenatally Exposed to Alcohol

Abstract

Despite the high rate of criminality in adults with fetal alcohol spectrum disorder (FASD), little is known about the risk and protective factors associated with criminal behaviour in this population. Semi-structured interviews were conducted with eight families of adult children with prenatal alcohol exposure (PAE) to better understand the factors that increase or decrease criminality. Families identified four risk factors that contributed to their adult child’s trouble with the law, including difficulty with self-regulation, negative influences from the peer group, substance use, and multiple transitions from one living environment to another (e.g., living with different caregivers, residing in group homes, incarceration, or participating in inpatient treatment programs). Protective factors that were reported to help mitigate the effects of the legal issues were structure and supervision, educational and occupational success, access to clinical and financial support, and having a strong network of positive influences. The findings from this study emphasize the need for more family-centred interventions to improve the outcome for adults with PAE.

The teratogenic effects of alcohol cause lifelong physical, cognitive, and behavioural impairments that are collectively called fetal alcohol spectrum disorder (FASD). As many as 60% of individuals with FASD will experience trouble with the law (Streissguth, Barr, Kogan, & Bookstein, 1997) and a systematic literature review has established that individuals with FASD are 19 times more likely to be incarcerated than members of the general population (Popova, Lange, Bekmuradov, Mihic, & Rehm, 2011). Although current models of criminality in FASD emphasize the poor fit between an individual’s capabilities (e.g., neurocognitive impairments) and the environmental demands (e.g., lack of structure, multiple transitions such as moves to foster homes or group homes, kinship placements, not having a fixed address, or temporary placement in residential programs or correctional facilities; Brown, Connor, & Adler, 2012; Malbin, Boulding, & Brooks, 2010), few studies have examined the contributing role of the family system and psychosocial milieu of the individual. The aim of this qualitative study is to explore the risk factors and protective factors associated with criminality identified by families of adults with prenatal alcohol exposure (PAE).
Fetal Alcohol Spectrum Disorder

Fetal alcohol spectrum disorder (FASD) is an umbrella term that describes the range of effects of prenatal exposure to alcohol (Cook et al., 2015). Estimates vary, but the prevalence of FASD in Canada is estimated to be 9.1 in 1,000 live births (Health Canada, 2017), while the prevalence of FASD in the United States and Western Europe has been estimated to range from 2% to 5% of the population (May et al., 2009). In 2018, the estimated prevalence of FASD among first-graders in four U.S. communities was found to range from 1.1% to 5.0% using a conservative approach, but the findings may not be generalizable to all communities (May et al., 2018). FASD is considered to be the leading preventable cause of intellectual disability in North America (O’Leary et al., 2012).

Although the direct mechanism whereby alcohol affects the developing fetus remains unclear, the permanent teratogenic effects of alcohol have been well documented (Riley & McGee, 2005). Factors such as quantity of alcohol consumed, number of exposures to alcohol and timing of exposure, individual differences in the tolerance of alcohol, poor nutrition during pregnancy, and exposure to other intoxicants can affect fetal development and lead to congenital impairments that are attributed to organic brain damage (Astley & Clarren, 2000; Streissguth et al., 1997). There is extensive evidence that PAE leads to cognitive and behavioural impairments, termed “primary disabilities” or adverse life outcomes, even in the absence of physical characteristics (Connor, Sampson, Bookstein, Barr, & Streissguth, 2000; Rasmussen, 2005). There is a wealth of research that suggests that individuals with FASD have significant impairments in executive functioning (Pei, Job, Kully-Martens, & Rasmussen, 2011; Vaario, Riley, & Mattson, 2011), adaptive behaviour (Brown et al., 2012; Carr, Agnihotri, & Keightley, 2010), academic abilities (Rose-Jacobs et al., 2012), and social skills (Kully-Martens, Denys, Treit, Tamana, & Rasmussen, 2012).

In addition to the adverse life outcomes associated with CNS dysfunction, many individuals with FASD are exposed to adverse environmental factors postnatally such as trauma, instability in the home environment, living in an impoverished environment, and inconsistent parenting styles (Henry, Sloane, & Black-Pond, 2007; Olson, O’Connor, & Fitzgerald, 2001). Furthermore, one publication has reported that only 20% of individuals with FASD reside with their biological mothers (Streissguth et al., 2004). When cognitive and behavioural impairments are accompanied by an adverse environment, the interaction of these vulnerabilities may lead to the development of additional problems, labelled “secondary disabilities” or secondary impacts, such as mental health disorders (90%), disrupted school experience (61%), legal problems (60%), and confinement (50%; Clark, Lutke, Minnes, & Ouellette-Kuntz, 2004; Streissguth et al., 2004).

Historically, research has sought to delineate the risk factors associated with secondary impacts in FASD, yet few studies have examined the protective factors that contribute to positive life outcomes. One longitudinal study identified an array of protective environmental factors for individuals with FASD, including having a stable and nurturing home environment, having basic needs met, never experiencing violence, receiving a diagnosis of FAS before the age of six, receiving a diagnosis of FAS, and receiving supports and services (Streissguth et al., 1997; 2004). Furthermore, Canadian researchers have noted that factors such as having stable employment, having a strong social network, having access to supports and services, and living independently may help reduce the effects of secondary impacts for adults with FASD (Clark, Minnes, Lutke, & Ouellette-Kuntz, 2008). Taken together, the findings from previous research suggest that although individuals with FASD have biological predispositions that cannot be altered (i.e., adverse life outcomes), the presence of protective factors can help prevent the emergence of adverse life outcomes such as criminality and incarceration (i.e., secondary impacts).

Criminology in Individuals With FASD

Individuals with FASD are overrepresented in the criminal justice system (Burd, Selfridge, Klug, & Juelson, 2003; Popova et al., 2011). In a study conducted in British Columbia, Canada, a cohort of 287 incarcerated youth between the ages of 12 and 18 participated in a foren-
The researchers found that of the individuals screened, 23.3% met the criteria for a diagnosis of FASD; however, only 1% had been diagnosed prior to the mandated assessment (Fast, Conry, & Loock, 1999). The findings from this study suggest that many individuals with FASD are undiagnosed prior to their involvement with the criminal justice system and are therefore precluded from accessing the supports and interventions that could help reduce the likelihood of criminality.

The adverse life outcomes experienced by individuals with FASD often lead to higher rates of problematic behaviour, such as lying, cheating, disobedience, and stealing, which could put them at increased risk of engaging in criminal acts (Nash et al., 2006). Furthermore, impulsivity (Schonfeld, Paley, Frankel, & O’Connor, 2006), aggression (Brown et al., 2012), difficulty understanding social cues (Kully-Martens et al., 2012), and limited understanding of cause and effect (Fast & Conry, 2004) create a susceptibility to peer pressure and victimization, violation of rules, and understanding the consequences of their actions (Brown et al., 2012; Chudley, Kilgour, Cranston, & Edwards, 2007). Whereas behaviours that violate social norms are typically ascribed to antisocial attitudes and defiance, in the case of FASD there is strong consensus among researchers, clinicians, and policy makers that the challenging behaviours exhibited by individuals with FASD are not willful but rather a consequence of neuropsychological deficits (Brown et al., 2012; Malbin et al., 2010). Indeed, it appears that the majority of criminal acts perpetrated by individuals with FASD are reactive and opportunistic rather than premeditated (Brown et al., 2012).

Malbin and colleagues (2010) proposed a neurobehavioural model of criminality in FASD in which neurobehavioural deficits are regarded as important contributors to criminal activity as a result of a poor fit between the individual’s abilities, their environment, and the expectations placed upon them. Rather than focusing on changes that involve a person’s deficits, proponents of the neurobehavioural model argue that effective treatment for offenders with FASD necessitates accommodations geared towards the individual’s unique needs as well as their strengths (Burd, Fast, Conry, & Williams, 2010; Malbin et al., 2010). By increasing the congruence between the individual’s neurobehavioural profile and the environmental demands, a preventative approach based on skill building and enhancing protective factors can be employed to mitigate the impact of secondary impacts such as trouble with the law (Henry et al., 2007).

**Familial and Environmental Factors**

Streissguth and colleagues (2004) found that the caregiving environment had a substantial impact on the outcome of individuals with FASD. Nevertheless, relatively little is known about the specific challenges and stressors that may affect the home environment (Olson, Rudo-Stern, & Gendler, 2011; Watson, Coons, & Hayes, 2013). The bulk of research has examined the impact of raising a child with FASD through the lens of parenting stress. A study examining parenting stress in 42 biological mothers of children with FASD found that higher levels of child externalizing behaviours (e.g., aggressive, oppositional, or defiant behaviour) and lower levels of parental support predicted greater maternal stress (Paley, O’Connor, Kogan, & Findlay, 2005). A subsequent study conducted with both biological and adoptive parents found that increased levels of parenting stress were associated with greater child externalizing behaviours, internalizing behaviours (e.g., anxious or depressed behaviour), and larger impairments in executive functioning and adaptive behaviours (Paley, O’Connor, Frankel, & Marquardt, 2006).

Similarly, qualitative studies have identified stressors reported by parents, including difficulty managing challenging behaviours and providing safety for their child (Caley, Winkelman, & Mariano, 2009), fear for the child’s future (Watson, Coons, Hayes, & Radford-Paz, 2013), and insufficient formal and informal supports (Brown & Bednar, 2004). Collectively, studies on parenting stress suggest that caregiving stress is associated with dysregulated behaviour in children and a lack of support and resources for families (Jirikowic, Olson, & Astley, 2012). While research has focused on the stressors faced by caregivers of children with FASD, little is known about the factors that contribute to resiliency and positive life outcomes. There is a need for further qualitative research in order to include the voice of families in research on FASD, with the goal of gaining an understanding of their...
experiences and identifying factors that may decrease the likelihood of criminality (Olson et al., 2011; Watson et al., 2013).

Method

A qualitative study consisting of semi-structured interviews was undertaken to explore the factors associated with criminality in adults with PAE. This study was approved by the Laurentian University Ethics Board, in accordance with the Canadian Tri-Council Recommendations for Research with Human Participants. Pseudonyms were used in reporting.

Participants

Participants were recruited from various FASD groups across Ontario, Canada employing convenience sampling techniques. Thirty-three online FASD groups were contacted via e-mail inviting families who were interested in participating in the study to contact the researcher by telephone or e-mail. Individuals known to the researcher were also contacted and invited to participate in the study. This latter sampling technique, called respondent-driven sampling, is commonly utilized with hard-to-reach populations (Benoit, Jansson, Millar, & Phillips, 2005). Eight families from Ontario, Canada, participated in this study. In order to participate, caregivers had to have at least one adult child, 18 years of age or older who had been exposed to alcohol prenatally. One biological mother, five adoptive mothers, and two custodial grandmothers were included in the study (herein referred to as parents or caregivers). The age of the adult children ranged from 19 to 42 years, with an average age of 29.8 years. Six interviews were conducted with only the caregiver present, while two interviews consisted of parent-child dyads. See Table 1 for demographic information of the participants.

Qualitative Interviews

The semi-structured interviews employed a basic interpretive qualitative approach, which seeks to understand how individuals interpret and make sense of their lived experiences (Merriam, 2002). This methodology is grounded in the principles of phenomenology and symbolic interactionism and provides a richly descriptive account of the individual’s perspective of a situation. The interviews consisted of a blend of less and more structured questions, such as “How would you characterize your child’s relationship with the law?” and “Can you describe any strategies or supports you used to help you deal with your son/daughter’s challenging behaviours?” (Appendix A). The questions for the interviews were based on the

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* This participant’s primary caregiving role was as a custodial grandmother and considered this to be her family type.
universal risk and protective factors identified in previous research (Streissguth et al., 1997; 2004). The length of the interviews ranged from 45 minutes to 2 hours. With permission of the participants, interviews were digitally recorded to allow for subsequent transcription. To protect participant confidentiality, all names and identifying information have been changed.

Data Analysis

Interviews were analyzed using interpretive phenomenological analysis (Storey, 2007), which aims to capture the meaning participants ascribe to their experiences. The systematic process of analysis involves multiple reviews of verbatim transcripts by recording general comments in the margins and gradually identifying commonalities in participants’ experiences and overarching themes (Smith & Eatough, 2007). Families were given the opportunity to ensure that their words were not misrepresented through the use of member check, whereby a summary of themes is provided to participants and the content of the interview is synthesized to ensure that the information was accurately understood by the interviewer.

Results

The qualitative analysis of the interviews yielded four superordinate themes related to risk factors for criminality and four superordinate themes related to protective factors. Each theme and the corresponding subthemes are discussed in detail to provide an overall picture of families’ perspectives of the risk and protective factors associated with criminality.

Risk Factors for Criminality

Contributing factors fell under four superordinate themes: difficulty with emotional and behavioural self-regulation, having a negative peer group, substance use, and multiple transitions.

“He had uncontrollable rages”: Emotional and behavioural self-regulation. Families attributed their adult children’s involvement with the law to underlying difficulties with self-regulation and inhibitory control. Seven of the eight families reported that regardless of their child’s age, there was a lifelong pattern of poor frustration tolerance and emotional dysregulation. These seven families described violent outbursts that involved death threats, physical assaults, the use of weapons, and destruction of property. In many cases, the intensity of the aggressive episodes warranted police involvement to keep the individual and family members safe from harm. As Caroline, adoptive mother to Noah, explains, “He would threaten to kill our daughter. That was when he first became involved with the police. Threatened to kill us... we had to call the police sometimes because he wouldn’t calm down.”

Parents also described how poor inhibitory control, coupled with difficulty understanding the consequences of actions, led to impulsive criminal acts. In fact, every account of offending behaviour reported by the families in this study was opportunistic and reactive, not having been planned beforehand. Gavin, a young man with FASD, explained how impulsivity and difficulty in understanding abstract concepts such as ownership contributed to his criminal behaviour:

When I was younger I didn’t realize the consequence of ownership type of thing so I tended to sometimes go into people’s house and be like ‘oh that’s shiny, that’s nice’ and I would take it and I wouldn't really feel… bad about it and then I would go in the grocery store or something and say “I want that but I don’t have any money, yoink!”

“Needed to belong, needed to be accepted”: Peer group. Families also reported that social difficulties contributed to their child’s criminal behaviour and that their children often experienced rejection by their peers. Caroline, an adoptive mother to a 22-year-old son with PAE, stated:

[H]e seems to have friends for a while, and all of a sudden they disappear and we don’t know why. He said to me the other day ‘I decided all my friends are not really my friend except for two.’ One was a girl that we’ve met once. And the other was a guy that we haven’t seen for maybe two years now.

Previous research has hypothesized that impairments in social skills may interfere with the ability to establish and maintain positive relationships (Kully-Martens et al., 2012). In par-
ticular, impulsivity, disregard for boundaries, hyperactivity, and disruptive behaviour may lead to rejection by well-adjusted peers. Without a positive peer group to turn to, individuals with PAE may be vulnerable to negative peer influences. Parents observed that peers who typically befriended individuals with PAE do not value appropriate social behaviour; rather, they tend to engage in behaviour such as substance use, truancy, and criminality. Six parents noted that their children’s criminal behaviour occurred in the presence of peers and families expressed concern that their children’s criminality was influenced by their group of friends.

Leah, a biological mother to Logan, worried that involvement in the criminal justice system exposed her son to a group of peers who have a history of criminality, thereby compounding the effect of the negative peer group.

“It’s a battle every day”: Substance use. The contribution of substance use to offending behaviour was noted by seven families. Parents explained that their child’s involvement with the law often occurred as a result of intoxication related to alcohol, drugs, or a combination of the two. In the case of Dawson, a 35 year-old man with PAE, criminality was a way to support his addiction. Sadie, his adoptive mother, explained how substance use led to her son’s involvement with the law: “He was a mess. He was doing drugs, prostituting himself to get drugs. He just trashed his apartment ... he was on drugs, really trashed it, supposedly about $4,000 damage so his roommate had to call the police.”

Three parents expressed concern that substance use also served as a gateway to other dangerous behaviour, such as stripping, prostitution, and stealing. Furthermore, Lauren stated that substance use interfered with her daughter Isabelle’s ability to maintain steady employment and avoid trouble with the law. Six families in this study reported that their child’s substance use began between the ages of 9 and 14 years and of these six parents, five reported that they are still concerned about their adult child’s drug or alcohol consumption. Consequently, substance use appears to be a lifelong battle for many adults with PAE and an important risk factor for criminality.

“It was just a continuous chaos”: Multiple transitions. A final contributing factor to criminality discussed by parents was the lack of structure related to multiple transitions from one living milieu to another, including foster or kinship placements, friends’ houses, residential treatment programs, juvenile detention centres, and jail. Five parents reported that their children often moved from one household to another, rendering it difficult to have a stable and consistent home environment. For some individuals with PAE, changes in the home environment may include a combination of living with biological, foster, and/or adoptive families. In addition, some parents reported that their children would reside with a multitude of friends for extended periods of times, not having a permanent household for a significant timeframe. For example, Audrey, an adoptive mother to a daughter with FASD, stated, “I don’t think I’m exaggerating if I say she lived in 20 different places between the ages 13 and 20.” The lack of structure ensuing from multiple transitions often led to unsupervised time, which four families identified as a contributing factor to criminality for individuals with PAE. Furthermore, Caroline indicated that she is unaware of the full extent of her adoptive son’s legal problems because of the multiple transitions that he has experienced: “So we ended up kicking him out of the house... He couch surfed for a while. And he had all sorts of times when he was involved with the police that we don’t know about.”

Protective Factors

Although families identified risk factors that contributed to their adult child’s involvement with the law, caregivers also spoke at length about the protective factors that helped decrease the likelihood that their child’s adverse life outcomes would result in criminality. The four superordinate themes identified were the importance of structure and supervision, the need for education and employment that is compatible with the individual’s strengths and vulnerabilities, as well as having positive influences.

“His behaviour is not going to change until you change his environment”: Structure and supervision. According to parental accounts, many instances of criminal activity occurred when there was little to no structure and a lack of adult supervision. Six parents attrib-
uted their children’s success to structured environments, stating that their children thrive in environments in which they do not have to engage in planning or organize their time. Along the same vein, three caregivers discussed the importance of supervision to protect their children from adverse life outcomes. Tara, an adoptive mother to a son with FASD explains:

> It was always this fine line of saying what his needs are and people saying you’re not letting him take enough risk ... you’re enabling him and not empowering him ... we’re sitting here today saying all the risks I didn’t let him take. The fact that he hasn't had a criminal record is because we contained his environment.

“*If he had been able to get an education then I think he’d be able to be a functioning member of society*”: Education and employment. Many individuals with PAE are unable to meet the demands in educational and vocational settings (Streissguth et al., 1997); consequently, they are often faced with a lot of unstructured time in adolescence and adulthood. Five parents spoke of the importance of having activities that provide social connections within a structured setting. As Kate, an adoptive mother to a son with FASD, stressed, “He's always looking for work because the biggest, biggest thing that we would notice is that filling his spare time is essential, that he cannot have spare time...“ Although these five parents noted that there were challenges in finding vocations tailored to the needs and strengths of the individuals, families also emphasized the positive impact that education and employment had on the well-being and self-esteem of their children.

Parents reported that their children experienced more positive outcomes when the emphasis was placed on their strengths rather than their vulnerabilities. Although school was a challenge for most individuals with PAE, three parents stated that their children had greater success in environments that focused on practical skills instead of academic abilities. Furthermore, six families expressed the critical need to build a partnership with teachers and principals in order to support the specific needs and learning styles of individuals with PAE.

“They really wanted him to succeed in this endeavour and not end up in jail”: Supports. Beyond the strategies employed by parents to support their children, families also emphasized the importance of having access to clinical and financial resources in order to mitigate the effects of secondary impacts. Although there was overwhelming consensus among families that the services available were insufficient to adequately meet the needs of individuals with PAE and their family members, caregivers remained appreciative of the assistance they had received. In part, families spoke of the programs that were available to assist their children in gaining their independence in adolescence and adulthood. Parents also spoke of the importance of having supports for family members to counteract the feelings of hopelessness, frustration, and isolation experienced by parents of individuals with PAE.

“That helps because you know you’re not the only one”: Supports for the family. All caregivers spoke of the importance of having supports for family members. Five parents expressed that formal supports such as parent support groups helped decrease the sense of isolation and hopelessness. Perceived benefits of formal supports for families were twofold; first, the supports provided an avenue where caregivers could learn strategies or techniques that helped them respond to their child’s behaviour more effectively, and second, it also helped them share their experiences with other families who truly understood what it was like to raise a child with PAE. Parent support groups allowed parents to shift from a framework of accountability of behaviour and shame to one that takes the CNS dysfunction into account, thereby allowing parents to have more realistic expectations for their children. As Audrey, an adoptive mother to a daughter with FASD, stated:

> [O]ne night [at the parent support group meeting] I shared something that Serena had done and one of the mothers whose daughter is living the exact same life that Serena did said to me jokingly, “when are you going to get it? That’s what these kids do!” And we laughed. And I thought if I’d been home alone, I’d be bawling my eyes out for days. But because she really understood we laughed about it, like I couldn’t believe we laughed about this terrible situation, but it broke the pressure.
“They really wanted him to be safe. It was nice, it was a miracle”: Supports for individuals with PAE. One of the lifelong challenges described by families of children with PAE was striving for interdependence instead of independence, which entails greater emotional, social, and financial support for daily living (Clark et al., 2008). Three parents discussed the challenge of providing supervision once their adult children moved to a different city for post-secondary studies or employment. Given the dearth of FASD-specific supports, all parents were faced with the challenge of finding services suitable to their child’s unique vulnerabilities, including individual counselling, residential programs, child and youth workers, and summer camps. The majority of parents reported having to look beyond community supports to find adequate services, often paying out of pocket. Regardless of the modality of the support provided, four parents reported that targeting adaptive behaviours such as social skills and daily living skills had the greatest impact in terms of preventing criminal behaviour. As Tara, an adoptive mother to a son with FASD, explained:

He’s always had a worker to help him with either daily living skills or community involvement. He still has the special services home worker. She helps him with their dishes and laundry and cleaning the apartment. So Gavin’s grown up learning to be interdependent. He never had somebody say to him oh you’re 16, you should be able to do this. He never had those kinds of comments.

By striving for interdependence rather than independence, parents were able to balance their child’s need for autonomy and their need for safety. Furthermore, improving social skills helped individuals with PAE integrate more easily into peer groups that provided more positive influences.

“I just surrounded her by what I consider really positive forces”: Positive influences. Despite the existing vulnerability to negative pressures, positive peer influences can have an equally important impact on individuals with PAE. Six parents discussed their child’s lifelong challenge of finding a positive peer group. Three parents noted that their children benefited greatly from summer camps designed specifically for individuals with disabilities because it provided a safe and structured environment where they could meet individuals who were at similar developmental levels. Leah, a custodial grandmother to Chloe, spoke of the value of surrounding her granddaughter with role models who instilled hope that she could lead a happy, productive life. Noting the intergenerational patterns that often precede individuals with PAE, Leah emphasized the need to disseminate the message that individuals can overcome challenges and adversity related to PAE and experience positive life outcomes.

Furthermore, parents often acted as a consistent positive influence in their child’s life through their role as advocates. Although families faced a multitude of barriers, caregivers exemplified the positive characteristics they hoped to cultivate in their children by remaining optimistic and positive in the face of challenges. Citing the paucity of supports and services, Leah, a custodial grandmother to Chloe, gave up her occupation and dedicated herself fully to seeking resources, educating professionals, and providing financial support for the few services available. Within the legal system, three parents reported having to find lawyers who were either familiar with the lifelong effects of PAE or amenable to learning about FASD, as well as parole officers who were willing to take their adult child’s vulnerabilities into account. Kate, an adoptive mother, stressed the need to be tenacious: “And you can’t take no for an answer. Like for someone to say, ‘sorry we can’t afford that’ is absolutely an abrogation of every human being’s rights.” Through their unwavering dedication, parents hoped to protect their children from secondary impacts by increasing awareness of FASD and thereby changing the expectations placed upon individuals with PAE by the educational and judicial systems.

Discussion

Difficulties with behavioural and emotional self-regulation, combined with environmental factors such as negative peer influences, substance use, and multiple transitions from one place of residence to another can create situations in which the demands placed on the individuals outweigh the capabilities to cope with the exigencies. The results from this study are consistent with previous research findings that
individuals with PAE fare better in situations that are predictable, structured, and do not require decision-making (Brown et al., 2012). While it is important to note that the risk and protective factors identified in this study are similar for all offenders irrespective of whether there was prenatal exposure to alcohol or not, the lack of consistency in routine is particularly problematic for individuals with PAE because they often have difficulty adapting to new environments as a result of adverse life outcomes, such as reduced ability to generalize skills from one setting to another (Malbin, 2004), deficits in executive functioning relating to planning, inhibitory control, and cognitive flexibility (Pei et al., 2011), as well as impairments in adaptive behaviours such as daily living skills and communication (Carr et al., 2012). The results from this study tend to support the neurobehavioural model, which suggests that cognitive deficits, particularly impairments in executive function, interfere with the ability to self-regulate, grasp social cues, control impulsive behaviour, anticipate consequences, and learn from mistakes or the mistakes of others (Coggins, Timler, & Olswang, 2007; Kodituwakku, Handmaker, Cutler, Weathersby, & Handmaker, 1995). Furthermore, environmental demands such as multiple transitions and lack of structure may exceed the individual’s capabilities to adapt to situations and consequently, individuals with FASD are more likely to display maladaptive behaviour that may lead to delinquent behaviour (Fast & Conry, 2009; Malbin et al., 2010; Page, 2002).

Where offenders with FASD might differ from typically-developing offenders is in terms of antisocial cognitions, which implies that individuals hold beliefs and attitudes that are in favour of criminality and intentionally engage in illegal activities. There is a wealth of research suggesting that individuals with FASD may not have the cognitive ability to meet legal standards for criminal intent (Brown et al., 2010; Fast & Conry, 2009; Moore & Green, 2004; Roach & Bailey, 2009). From a psychosocial perspective, deliberate criminal behaviour involves decision-making in complex, social situations (McLachlan, Roesh, Viljoen, & Douglas, 2013; Kully-Martens, Treit, Pei, & Rasmussen, 2013). The self-regulation involved in criminality requires individuals to be aware of cues from the social context, rely on cognitive and emotional processes to make decisions, and inhibit behaviour that is in violation of social norms (Brown et al., 2012; Kully-Martens et al., 2013). However, individuals with FASD show marked deficits in these self-regulatory abilities (Connor et al., 2000; Kodituwakku, Kalberg, & May, 2001; Kully-Martens et al., 2012). While criminal behaviour is often attributed to defiance, conduct problems, antisocial attitudes, and lack of motivation, it may be the case that deficits in executive functioning, adaptive behaviour, and social skills may be a more accurate explanation for criminality in FASD (Brown et al., 2012; Malbin et al., 2010).

Parental concerns with the impact of peer influences on their child’s behaviour is reflective of existing research, which suggests that the majority of criminal acts perpetrated by individuals with PAE occur within a group setting and rarely occur unaccompanied (Brown et al., 2012). Currently, offenders with FASD are sentenced in the same manner as typically developing peers despite their unique needs. Insofar as it can be ascertained, current rehabilitation and treatment models for offenders that are predicated on a cognitive approach are less effective for individuals with FASD than structured behavioural treatments targeting maladaptive behaviours (Brown et al., 2012). Moreover, as parents in this study indicated, incarceration may have a detrimental effect on individuals with FASD because they are vulnerable to the influence of their peers as a result of adverse life outcomes (Kully-Martens et al., 2012). Without a positive group of friends to turn to, children with FASD have a tendency to seek social connections with negative peer groups. Thus, by placing them in a setting with other offenders, it is likely that individuals with FASD will seek a sense of belonging among other incarcerated criminals.

Families also discussed the protective factors that led to more positive outcomes for their children. In particular, caregivers reported that having a structured environment, finding educational programs or employment opportunities suited to their adult children’s strengths and vulnerabilities, having access to supports and services for both the individual with PAE and the family members, and surrounding their children with positive influences were all factors that promoted well-being and decreased
Parents in this study reported that their adult children required lifelong supports for day-to-day living. Clarren (2000) coined the term “external brain” to describe the role of caregivers as providers of structure and consistency to help individuals with PAE regulate their emotions and behaviour. Indeed, many researchers and clinicians highlight the need to focus on strength-based approaches and environmental accommodations as a way to mediate the interaction between the individual’s neurobehavioural profile and the environmental demands (Green, 2007; Malbin et al., 2010). Recognizing the importance of preventative strategies such as reducing the amount of transitions, identifying precipitating factors that contributed to distress, and maintaining a routine, treatment plans for individuals with FASD should therefore delineate strategies for both the individual and the family to cope with unexpected circumstances that may arise (Brown et al., 2012). This message was echoed by the parents who participated in this study, who spoke of the importance of family-based interventions in addition to individual services. Unfortunately, many individuals with PAE do not get diagnosed prior to their involvement with the criminal justice system (Fast et al., 1999) and therefore do not benefit from treatment or clinical services. Consequently, there is a striking need to shift the management of FASD from the judicial system to a more preventative approach that includes both mental health and educational sectors.

Although parents spoke of the importance of having supports and services, many families mentioned the financial burden associated with accessing and maintaining services for their children. Emma, a custodial grandmother, indicated that even when supports were available, many families were unable to access them because they lacked the financial resources. Many times, families had to make considerable sacrifices in order to pay for services for their children. As Kate, an adoptive mother, explained, “Eventually social services refused to pay for [the caregiver] so three weeks before he started college I had to sell my house.” Given that the caregiving environment has a significant impact on the well-being of individuals with PAE and that parental stress is negatively impacted by the lack of supports, it follows that facilitating access to services is an important part of ameliorating life outcomes for individuals with FASD.

According to the findings from this study, environmental accommodations should target the degree of structure and supervision in the home environment, facilitating access to educational programs and employment, improving emotional, social and financial supports for individuals with FASD and their families, as well as building a strong network of positive influences. In order to meet this demand, more services are needed within the health care and educational sectors in order to employ a preventative approach to criminality in FASD.

Limitations

Although this study helps elucidate some of the risk and protective factors associated with criminality in individuals with PAE, there are some important limitations. Despite efforts to recruit both offenders and non-offenders for this study, all individuals with PAE had engaged in some type of criminal activity, ranging from shoplifting to physical assault. The difficulty in recruiting individuals with PAE that have had no involvement with the law speaks to the severity of the issue. Previous research has found that at least 60% of adults with FASD experience trouble with the law (Streissguth et al., 1997) and most offenders engage in a repeated pattern of criminality that leads to incarceration (Chudley et al., 2007). Thus, more research is needed to compare offenders and non-offenders with FASD with regards to protective factors from criminality.

This study did not employ quantitative measures to assess executive functioning, adaptive behaviour, or cognitive abilities. As a result, it is impossible to determine the extent to which deficits in these neurobehavioural domains contribute to criminal behaviour in individuals with FASD. Although it is speculated that the difficulties with self-regulation and social behaviour discussed by participants are related to adverse...
life outcomes or primary disabilities commonly found in FASD, it is impossible to verify the relationship with the reported deficits employing a qualitative methodology. More research is needed to establish the unique contribution of cognitive and environmental risk factors to the experience of criminality in individuals with FASD.

It is also recognized that the sample in this study may not be fully representative of the heterogeneity of families of individuals with FASD. For instance, only one biological parent participated in the study. Moreover, participants consisted only of mothers or grandmothers. Although the term “parents” and “caregivers” were used to describe participants, it is important to note that the voice of male family members was not represented. While fathers and grand-fathers were invited to participate in the research project, the sample did not include any patriarch family members. It is possible that fathers may have a different perspective than mothers, and it is therefore essential to keep sample characteristics in mind when interpreting the results. Furthermore, it remains unclear how social factors such as socioeconomic status, level of education, gender, family type, race, social support, and parental characteristics such as background, age, and their level of education may also contribute to the unique challenges and opportunities faced by families. Some parents discussed this point, acknowledging that their own education and resources allowed them to access services that may otherwise not have been available to them. Other parents discussed the beneficial role of being part of a support group, whereas some families were not connected to such networks. When relevant, follow-up questions were asked to clarify how support groups may have helped families in enhancing protective factors. Future research with a more multifarious sample is therefore needed to better understand the contributory role of social characteristics on criminality in FASD.

Another limitation of the study was the small number of adults with PAE who participated in this study. While the focus of the research was on the family experience, only two adults with PAE participated in the semi-structured interview. As a result, the majority of the perspectives presented herein are from the caregiver’s point of view. Furthermore, it was not feasible to confirm if any of the other adult children with PAE actually had FASD. A possible avenue for future qualitative research is to explore the experience of adults diagnosed with FASD. Although attempts were made to include the voice of the individuals with PAE, it is important to consider that conducting interviews with parent-child dyads may affect the information disclosed during the interview because participants may not be comfortable disclosing information in the presence of their parent or child. Families were given the choice of interviewing together or separately, and in both cases the family requested to participate in the study together. In light of this, the use of unstructured focus groups in future research may be beneficial.

**Conclusions**

The present study explored families’ perspectives on the factors that either increased or decreased the likelihood of criminal behaviour in adults with PAE. Families reported that their children faced several risk factors for criminality, including difficulty with self-regulation, vulnerability to negative peer influences, susceptibility to substance abuse, and the experience of multiple transitions. Conversely, families found that structured environments, educational and occupational accommodations geared towards strengths, having access to supports, and increasing positive influences ameliorated life outcomes for individuals with PAE. The findings from this study highlight the importance of including the voice of families in research to inform policies aimed at preventing criminality and developing rehabilitative strategies that accommodate the developmental needs of individuals with PAE.

**Key Messages From This Article**

**People with disabilities.** You deserve access to education, employment, and supports that are appropriate for your strengths and needs. These services should include your family and others who have a positive influence on your life.

**Professionals.** Services for individuals prenatally exposed to alcohol should consider the specific adverse life outcomes and secondary impacts that may increase risk of criminality, while enhancing the protective factors that promote more positive outcomes. Interventions should be family-centred.
**Policymakers.** Individuals exposed to alcohol prenatally are overrepresented in the correctional system. There is a need for a provincial strategy focused on prevention, early intervention, family-centered services, and appropriate rehabilitative strategies.

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**References**


Appendix A: Interview Guide for Parents

1. Tell me about your son/daughter. What is he/she like?
2. What is it like being a parent to your son/daughter?
3. When did you first suspect that your son/daughter had FASD?
4. How old was your son/daughter when he/she received the diagnosis of FASD?
5. What kind of supports or services for FASD has your son/daughter received?
6. If you think back to your son/daughter’s childhood and adolescence, how would you describe the home environment?
7. Please describe your child’s current living arrangement.
8. Before the age of 18, in how many different households did your son/daughter live?
9. What were their living arrangements like in the past?
10. Was there a time in your son/daughter’s life when you would you say they did not have their basic needs met? (Follow-up: If so, at what ages?)
11. What were the challenges you faced during that time?
12. Can you tell me about the most positive time during your son/daughter’s life?
13. At which ages would you describe your son/daughter’s living situation as stable and nurturing?
14. Can you describe some of the challenging behaviours your son/daughter exhibited before the age of 18?
15. Can you describe any strategies or supports you used to help you deal with these behaviours?
16. What did you find helpful in dealing with the challenging behaviours?
17. How would you describe your son/daughter’s relationship with his/her friends?
18. Has your son/daughter ever been the victim of physical abuse, sexual abuse, or domestic violence?
19. Can you tell me about your child’s alcohol or drug use? (Follow-up: Can you describe what that experience was like for you and for your child? Can you tell me at which ages he/she used alcohol and/or drugs?)
20. How would you characterize your child’s relationship with the law? (Prompt: problems with police, accused of a crime, convicted of a crime)
   If there is involvement with the law:
   a. What was the most difficult part of that experience?
   b. What was the most helpful during that experience?
   c. What factors do you think contributed to your son/daughter’s involvement with the law?
   If there is no involvement with the law, why do you think your son/daughter did not experience any trouble with the law?
21. If you could have any services or supports, which services would you have wanted?
22. How is having access to services meaningful to you? (Prompt: Why do you think having access to services is important?)
23. Do you think that there is something that could have changed the outcome for your son/daughter’s live, either in a positive or negative way? (Prompt: Is there anything that could have improved or worsened the outcome of your son/daughter’s life?)