

FETAL ALCOHOL SPECTRUM DISORDERS: USING KNOWLEDGE, ATTITUDES AND PRACTICE OF JUSTICE PROFESSIONALS TO SUPPORT THEIR EDUCATIONAL NEEDS

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ABSTRACT

Background

People with Fetal Alcohol Spectrum Disorders (FASD) can be involved in high risk, socially unacceptable and harmful behaviours and are at high risk of engaging with the justice system.

Objective

To obtain baseline data on Western Australian justice professionals' knowledge, attitudes and practice relating to FASD to inform the development of FASD resources.

Methods

Cross sectional study using on-line survey methods, descriptive analysis of quantitative data and content analysis methods for qualitative data.

Results

1873 people were invited to complete the survey. A total of 427 (23%) judicial officers, lawyers, corrective services personnel and police completed the survey. The majority had heard of Fetal Alcohol Syndrome (85%) but were less familiar with FASD (60%). Only 16% of respondents identified the key features of FASD as permanent and only 48.4% considered psychological difficulties as important. The majority of legal and judicial officers and approximately half the police officers considered that knowledge about FASD was very relevant to their work.

Conclusion

There was widespread agreement of the need for more information and training about FASD to optimise outcomes for people with, or suspected of having a FASD, engaging with the justice system.

Key Words: *Fetal Alcohol Spectrum Disorders, judges, magistrates, lawyers, corrections officers, police*

The largest island in the world, of similar size to the USA but with a population of only 24 million¹, Australia has a history of embracing alcohol as a significant part of work, social and sporting celebratory activities. Data from the Australian Institute of Health and Welfare (2013) has 18.2% of people over the age of 14 years in the 'risky' category for lifetime risk from alcohol use and 59.9% in the low risk category.² Western Australia, the largest state in Australia with a population of 2.6 million concentrated in the capital city of Perth (79%) and south west corner (92%)³, has higher rates of alcohol consumption

than the national average for risky levels of drinking (21.6%) and comparable rates for low risk drinking (60%).² The rates of drinking alcohol during pregnancy are high in Australia with data varying from 40% - 80%.^{2,4-6} Australian research shows a greater proportion of non-Aboriginal women drink alcohol during pregnancy than Aboriginal women. However, Aboriginal women who consume alcohol during pregnancy do so at riskier levels.^{2,4,7}

Fetal Alcohol Spectrum Disorders (FASD) occurs exclusively from prenatal exposure to alcohol. FASD are characterized by

central nervous system dysfunction giving rise to developmental, sensory, learning and behavioural difficulties with a range of cognitive impairments.⁸⁻¹¹ A diagnosis of Fetal Alcohol Syndrome (FAS) requires the presence of characteristic facial features, and poor growth; partial FAS is diagnosed when only a sub-set of the characteristic facial features are present, in addition central nervous system abnormalities in association with prenatal alcohol exposure.¹² A diagnosis of Neurodevelopmental Disorder – Alcohol Exposed (ND-AE) requires central nervous system abnormalities in association with prenatal alcohol exposure, but facial features and poor growth are not required for the diagnosis.¹² Although only about 30% of children with FASD have an intellectual disability (IQ <70)¹³ all have neurocognitive deficits that are permanent and negatively impact upon their development, resulting in lifelong progressive and complex impairment. The central nervous system dysfunction arising from prenatal alcohol exposure has a negative impact upon the life trajectory of children and young people with FASD including: impaired early attachment and psychosocial development¹⁴, impaired attention¹⁵, and increased impulsivity and memory and learning difficulties.¹⁶ The deficits arising from prenatal alcohol exposure can often lead to secondary problems including poor educational outcomes, social exclusion, low self-esteem, mental health disorders, substance misuse and dependence, and early contact with the law. FASD can lead to socially unacceptable harmful behaviours, antisocial activities, violent crime, and being subject to or committing sexual predation.¹⁷⁻²⁰ Deficits associated with FASD such as memory, understanding abstract concepts, reasoning, understanding cause and effect, learning from past mistakes, and understanding and meeting social norms and expectations²¹⁻²⁵ have specific relevance to youth engaging and interacting with police, lawyers and judicial officers. Young people with FASD are easily led and coerced by their peers and may also be victimized both outside and inside the justice system.²⁶⁻²⁸ They may be unable to provide a record of events, names of people involved and timelines, and they may provide different versions

of the story for police at different stages of the interview or arrest process leading to allegations of confabulation and possible false confessions.²⁷⁻²⁹ These deficits also inhibit their ability to provide instruction to their lawyer, understand the court process and proceedings and decision made by the magistrate such as meeting bail conditions or parole orders.²⁶

A systematic literature review of FASD prevalence in correctional systems estimated there was a 19 times greater risk for individuals with a FASD to be incarcerated²⁵ and a Canadian study of youth on remand in a mental health care facility identified 23% with a diagnosis with a FASD.³⁰ Despite this estimated prevalence, a study completed in Eastern Canada among Judges and Crown Prosecutors identified gaps in knowledge regarding FASD, such as identifying clients when they had disabilities and dysmorphism.³¹ Senior judges and prosecutors from both the Canadian and American Bar Associations have developed resolutions specifically addressing FASD.^{32,33} The resolutions were developed in response to an increased understanding of how FASD contributed to youth engaging early with systems of justice across North America. These resolutions were passed in 2010 and 2012 and urged the Canadian and American governments to allocate additional resources, commit to alternatives to the current criminalization of people with FASD, and amend sentencing laws to accommodate the disability of those with FASD. The resolutions also urge legal professionals and state and federal professional associations, to support training and education and support access to FASD experts for screening and assessment.

Australia has a Federal system of government with court decisions and legislation made by Federal and State Courts and Parliaments. There is a separation of powers – the Legislature, Executive and Judiciary. Western Australian courts are administered by the Department of the Attorney General and the judiciary presides over the courts and delivers justice to the community through sentencing in criminal cases and decisions in civil cases. There are different levels of courts in Western Australia (WA) with the Supreme Court being the highest. The Children’s Court of WA deals with offences

alleged to have been committed by young people age 10 to 17 years.

The Australian Institute of Health and Welfare report *Juvenile justice in Australia: 2010-11* showed presentation at an increasingly early age into juvenile justice systems and an overrepresentation of Indigenous youth.³⁴ It was estimated that a disproportionately large number of the 7,265 young people under juvenile justice supervision at that time were likely to have a FASD, although there have been no studies to provide a reliable estimate of prevalence of FASD. Two Australian inquiries into FASD received numerous submissions in relation to individuals with a FASD or suspected FASD who come into contact with the justice system.^{35,36} In their submissions to the House of Representatives Standing Committee on Social Policy and Legal Affairs Inquiry into FASD; Legal Aid New South Wales (NSW), Aboriginal Legal Service NSW and the Aboriginal Disability Justice Campaign asserted that children and youth with disabilities entering the criminal justice system were becoming criminalized in care because their cognitive impairments were not understood.³⁶ These submissions identified the need for alternatives to incarceration for youth with a FASD. The NSW Law Reform Commission report 'People with cognitive and mental health impairments in the criminal justice system' estimated the rates of youth with a cognitive impairment and noted that this group may potentially include youth with as yet undiagnosed FASD.³⁷

There have been several Australian reports which make reference to FASD and justice, alternative sentencing and the economic cost of incarceration. A national report 'Doing Time - Time for Doing' and a consultation paper by the NSW Law Reform Commission highlighted the connection between FASD and the involvement of young people with the criminal justice system in Australia.^{37,38} The Deloitte Access Economic report for the Australian National Council on Drugs highlights the significant savings with diversion to community rehabilitation of offenders from prison³⁹, and the 'Kimberley Juvenile Justice: Improving the current juvenile justice system' report also made

19 recommendations with respect to working with young offenders and alternative sentencing options.⁴⁰

This paper summarizes the development of, and findings from, cross-sectional surveys of WA justice professionals in the judicial, legal, corrections and police sectors to assess their knowledge, attitudes and practice in relation to FASD.⁴¹ The paper also describes how the findings informed the development of relevant and appropriate FASD educational interventions for justice professionals and how they have led to new opportunities for further collaborations and research.

METHODS

This was a cross-sectional study conducted in 2012 using on-line survey methods to assess justice professionals' FASD knowledge, attitudes and practice across four sectors of the WA justice system: 1) judicial, 2) legal, 3) corrections and 4) police. Participants were asked to provide: personal and professional demographic information; answer questions regarding their awareness and knowledge of FASD; rate their agreement with a series of questions using a Likert scale; and respond to a series of open ended questions.

Reference Group

A Reference Group was established to advise and assist with the study design, survey development and participant recruitment; building relationships with staff in each sector; and reviewing and approving project documents and reports. Organisations involved in the WA justice system: Law Society, Bar Association, Legal Aid, Aboriginal Legal Service, Family Law Practitioners, Department of the Attorney General (DotAG), Department of Corrective Services (DCS), and Police; and consumer and community organisations Foster Care Association of WA and the National Organisation for Fetal Alcohol Spectrum Disorders Australia (NOFASD – previously NOFASARD) were invited to nominate a representative to participate on the Reference Group. The final composition of the Reference Group included a magistrate

representing the WA Law Society, a lawyer representing Legal Aid WA, Deputy Commissioner WA Police, CEO WA Foster Care Association, WA representative from NOFASD Australia (foster carer of young boy with FASD) and a senior staff member from DotAG and DCS each with expertise in research.

Questionnaire Development

An existing Canadian questionnaire developed by Cox et al³¹ was reviewed by the Reference Group and used as a starting point, although it was deemed not directly relevant across all the intended justice sectors of the WA justice system to be surveyed. In consultation with the Reference Group and other staff from DCS, DotAG, Legal Aid WA and WA Police a draft survey comprising: 1) a generic set of questions applicable to all sectors, and 2) questions specific to each sector was developed. The survey was reviewed by the sector members of the Reference Group with two to three colleagues in their workplace for relevance to their sector. Their feedback and suggested amendments were included in the final questionnaire for each sector which was approved by all members of the Reference Group. The development, review and finalisation of the questionnaires was conducted over a period of six months in 2011 and 2012, with significant input from DotAG and DCS staff uploading the questionnaire to their internal website. Copies of the questionnaires are available in the report (Appendices 2a-d).⁴¹

Questionnaire Administration

To accommodate sector specific information technology and security requirements, different portals were used to disseminate the on-line survey: 1) Survey Monkey[®], 2) secure internal DCS system, and 3) secure internal DotAG system. Potential participants received an email containing a letter of support from their organisation, a letter from the research team outlining the study objectives and protocols and a link to access the survey. Reminders were sent to all initial contacts utilising mandated sector-specific secure pathways. Additional reminders were delivered through word of mouth and phone follow-up to colleagues by sector representatives

on the Reference Group. The online surveys closed after a period of two months and DotAG and DCS staff subsequently provided their data to the researchers on CDs due to security issues with forwarding via email.

Recruitment

(a) Judicial

All judicial officers (judges, magistrates and registrars) from all WA courts and the State Administrative Tribunal (n=133) were invited to participate in the on-line survey. All judicial officers received their letters and a link to the survey through the secure DotAG internal electronic communication system.

(b) Legal

An invitation to participate in the study survey was emailed by Legal Aid WA to all lawyers in their criminal law section and other lawyers working with Legal Aid in criminal, family and civil law across WA (n=90). The email included a link to the survey which was accessed using Survey Monkey[®].

(c) Corrections

DCS circulated an email to all staff within youth justice (n=400) and youth custodial service (n=250). The survey was also advertised on the DCS intranet (number reading the information on the intranet unknown). The email and website provided a link to the survey which was available on the DCS secure internal communication system.

(d) Police

A random sample of 1000 sworn police officers from the rank of constable to inspector received an email inviting them to participate in the study survey. The email included a link to the survey which was accessed using Survey Monkey[®].

Data Analysis

Descriptive analysis of the quantitative data was undertaken using IBM SPSS Statistics Version 19. Likert scale responses of 'strongly agree' and 'agree' were combined into one category 'agree', and 'strongly disagree' and 'disagree' were combined as 'disagree'. Qualitative data were independently coded and analysed using qualitative content analysis methods^{42,43} by three of the four authors (RM, RW and HJ). Cross

analyses of the categorical independent coding were reviewed and demonstrated significant agreement.

Ethics

Ethics approval for this project was granted by The University of Western Australia Human Research Ethics Committee. Approval to conduct the survey was granted by the DCS Research and Evaluation Committee, the DotAG Research Application Advisory Committee via the DCS Research and Evaluation Committee and the WA Police Research Application Review Committee.

RESULTS

Demographic Information

From the total of 1873 people invited to participate, 427 (23%) completed the survey: 30 judicial (23%), 25 legal (28%), 157 corrections (25%), and 215 police (22%). Legal and corrections respondents were predominantly female (80% and 76%) and judicial and police respondents were predominantly male (57% and 81%). The majority of respondents worked in the capital city of Perth or the outer metropolitan area (78%) and the most common age group was 40-49 years (28%). A high proportion of responding judicial officers (97%) and police officers (69%) had worked in the justice sector for 11 or more years compared to legal (28%) and corrections (25%) officers.

The demographic questions were consistent across all sectors, however sector specific questions varied according to what was relevant to that sector. Detailed analysis of all questions is available in the final report.⁴¹

Awareness of FASD

A higher percentage of all respondents (85%) had heard of FAS compared to FASD (60%) with approximately 50% describing their knowledge as "having a basic understanding of the condition and how it affects children and adults". The most common source of information about FASD was from the media, with colleagues and presentencing reports the next most common sources of information. More correctional staff had participated in formal education sessions on

FASD (35%) than professionals in other sectors (8%).

Knowledge and Beliefs about FASD

Alcohol exposure in pregnancy was understood by the majority of judicial (85.9%), legal (95.8%), corrections (86.0%) and police (75.4%) respondents to be a key feature for FASD. Almost half of the judicial, legal and corrections respondents (47%, 50% and 42%) considered physical development as a key feature of FASD in contrast to 16% of police respondents. A greater percentage of judicial, legal and corrections participants considered psychological development was a key feature of FASD (54%, 80% and 67%), while police participants were the least likely (33%). Less than a quarter of respondents across all sectors identified the key features of FASD as permanent (17.9%, 25.0%, 23.3% and 11.4%). More judicial, legal and corrections (64.3%, 96.0% and 88.6%) respondents disagreed with the statement 'People grow out of FASD' while only 38% of police respondents disagreed. There was no consensus with respect to the statement 'FASD occurs primarily in Indigenous families'. Approximately half of legal (58%) and corrections (51%) respondents disagreed while 57% of police respondents and 30% of judicial respondents neither agreed nor disagreed.

Information Needs

A high percentage of judicial, legal and corrections respondents (97%, 92% and 97%) wanted more information about FASD, while approximately half the responding police officers (57%) were seeking more information. In response to the question 'What type of information would you prefer'?

- 1) 80% wanted guidelines to deal with FASD,
- 2) 72% were seeking information on behaviours specific to FASD,
- 3) 59% required contacts for FASD support organisations,
- 4) 52% needed information on referrals for diagnosis, and
- 5) 36% sought a list of qualified specialists for FASD.

More than two thirds of respondents (71%) indicated their preference for information to be made available on a website or via email and 37% indicated that continuing professional development events would be useful. The majority of judicial officers said a detailed knowledge of FASD would assist their work (85%) and agreed they would modify their language (72%) and their approach to communication methods (62%) if a client had a known FASD. Legal and corrections participants (52% and 63%) responded that a more detailed knowledge of FASD would frequently assist them in their work, while 54% of police responded that this information would be of occasional benefit.

Experiences and Practices

Judicial, legal and corrections respondents (60.7%, 60.0% and 67.0%) were more likely to have suspected that a person had a FASD, compared with police respondents (42.8%). Judicial officers were more likely to recommend, require or send a person for a diagnostic assessment where FASD was suspected (26.9%) than respondents in the legal or corrections sectors. Police respondents were also less frequently informed that a person had a FASD or they knew that a person had a FASD (Table 1).

TABLE 1 Responses to questions about whether participants had ever suspected; recommended, required or sent a person for a diagnostic assessment where FASD suspected; been informed or knew that a person had FASD.

Justice professional	Suspected FASD (%)	Recommended, referred, required, sent for diagnostic assessment (%)	Been informed of FASD (%)	Known case of FASD (%)
Judicial	60.7	26.9	n/a	42.8
Legal	60.0	17.3	45.8	40.0
Corrections	67.0	16.3	39.2	52.5
Police	42.8	n/a	15.8	22.8

n/a: question not asked of judicial or police participants

Lawyers and judicial officers agreed that a client having a FASD was relevant to the assessment of fitness to plea and culpability: *“it would make me think even more carefully about how I explain complex legal matters. I would ask the court to source more resources for sentencing options.”* Judicial officers agreed the diagnosis had implications for capacity to comply with orders: *“I might try to be more creative in sentencing ... I might decide against a formal order if I felt to do so would be setting the offender up for failure.”* The majority of judicial, corrections and legal professionals had never recommended, required or sent a person for diagnosis, if a FASD was suspected.

Almost all legal (92%) and police respondents (100%) agreed that alternative and

diversionary sentencing would be helpful for those with a FASD. Nearly two-thirds of legal participants (64%) and 50% of police participants agreed that a supervised community based order was appropriate for a person with a FASD. The majority of legal participants (80%) disagreed that longer custodial sentencing was appropriate for a person with a FASD; however 60% of police participants were uncertain about longer custodial sentencing. Counselling and use of behaviour change programmes (62%) were the most frequently recorded alternative or diversionary options; other suggestions included using the juvenile justice team (48%), alcohol programs (48%), and drug programs (43%). These questions were not included in the judicial and corrections questionnaire.

Over a third of police identified that effects of a FASD would impact upon cautioning, interviewing and dealing with an offender; knowledge of the diagnosis would enable understanding when offenders repeat behaviours: *“you usually have a greater difficulty dealing with them as they tend to have no concept of how their offending affects others and do not show any regard for possible punishments.”* However, more than one quarter of police (34%) said knowledge that a client had a FASD would have no impact upon their work or would rarely have an impact on their work: *“I can feel sorry for the offender but I cannot avoid the consequence, it is up to another area of justice to deal with the offender after he is charged.”*

The participants informed us that they have no clear pathway through which to refer youth to have them diagnosed with a FASD or have their neurocognitive impairment understood and measured. *“If you are considering what you might reinvest your money in, I strongly petition you that you consider reinvesting money for youth who first engage with juvenile justice to have their neurocognitive abilities measured so that the strengths and weaknesses can be understood. Based upon their strengths their probation orders can be better made, their diversionary sentencing can be better understood and the capacity for them not to then enter a revolving door program and go on to graduate to adult incarceration can be better understood and potentially prohibited.”*

A corrections officer stated: *“This is an issue for prison facilities - how do we manage offenders with this disorder - they are vulnerable to others and their behaviour and poor impulse control cause them to come to the attention of staff and not in a positive way. We are supposed to prepare prisoners for the community and we can't with these ones. In addition their behaviour impacts on other prisoners who they are sharing cells/living accommodation with.”*

Another participant wrote: *“One of the messages that I hope that you will take home ... this is not diagnosed within juvenile justice. It is part of a broad spectrum of neurocognitive impairment amongst young people who are connected to juvenile justice. If part of the reinvestment that might be considered could look*

at specifically measuring neurocognitive impairment in juveniles, they would be treated equitably before the law, and the way that they are managed through the system from the first point of contact with police right through until consideration of sentencing would be far better informed. FASD needs to be seen as a mitigating factor, not an aggravating factor.”

DISCUSSION

This study provides the first description of knowledge, attitudes and practice related to FASD across judicial, legal, corrections and police sectors in the WA justice system. In a similar Canadian study, 70% of judges and 95% of prosecutors had heard of FASD.³¹ A Queensland study found that 80% of judiciary and 81% of legal professionals had heard of FASD⁴⁴ while in WA 77% of judicial officers and 64% of legal professionals had heard of FASD, although almost all had heard of FAS (90% and 100%). Mainstream media was the most common source of information about FASD in both WA (67%) and Queensland (45%). Judicial officers and legal professionals participating in the WA (90%) and Queensland (75%) studies identified a need for education and resources on FASD for justice professionals. Neither the Canadian nor Queensland study surveyed corrections staff or police.

The majority of participants in the WA study did not understand that FASD were permanent and knowledge about the physical and psychological key aspects of FASD was incomplete. Only children with FAS or partial FAS have characteristic facial features and physical signs and these two conditions comprise the smaller fraction of the pre-natal alcohol-related conditions included under the spectrum of FASD and all have neurocognitive deficits which are permanent and negatively impact upon their development, resulting in lifelong progressive and complex impairment. The incomplete knowledge about FASD may align with the additional finding that media sources were the most common source of information about FASD for all participants. Only correctional services had FASD embedded in their professional training, and so raises

opportunity for other sectors to develop continuing education modules about FASD accredited through their professional associations.

The majority of participating WA judicial officers (79%), lawyers (92%) and DCS staff (86%) and almost 50% of participating police officers perceived FASD as relevant to their work, as did 75% of judicial and legal respondents in the Queensland study⁴⁵; and respondents in both studies indicated a need for improved knowledge. Thus, we are in a strong position to advocate for professional bodies such as the WA Bar Association to consider FASD in 'advancing the public interest in the fair and proper administration of justice'.⁴⁶ There is impetus in WA from within the justice system and organisations such as Legal Aid WA, Aboriginal Legal Service WA, Commissioner for Children and Young People and Developmental Disability Council of WA for education at the undergraduate level and continuing professional development; and access to screening and assessment for young offenders to understand their level of impairment and consider alternative sentencing options in order to prevent recidivism. In his submission to the WA Inquiry into FASD The Honourable Chief Justice of WA, Wayne Martin stated: *"symptoms of FASD ... will place a person at a significant disadvantage when they enter the criminal justice system and we cannot keep individuals with FASD out of trouble if they have never been afforded a diagnosis or early intervention. They have different needs during their time of care through criminal justice, when they are cautioned, when they are sentenced and when they are managed for rehabilitation. They need to be instructed differently; they need to have their sensory needs and their cognitive impairments understood; and they need to be treated differently to be treated equally before the law."*³⁵

There was strong support across all sectors of the WA justice system for the development of appropriate alternative or diversionary sentencing options for people with FASD. One option for diversion in WA is consideration through the Mental Health Court. Eligibility for consideration through the Mental Health Court is possible when an IQ is classified as a disability (IQ<70). However, the greater

proportions of individuals with a FASD have an IQ greater than 70 and so are ineligible to be diverted. Yet the cognitive impairment common among all individuals with a FASD, even without intellectual disability, has life-long and negative life-limiting implications.

Another means of alternative or diversionary sentencing is through non-custodial placements enabled through justice re-investment. Justice re-investment has traction at a Commonwealth level and offers an intelligent and economically efficient solution to develop equitable care of clients with a FASD who are engaged with legal and corrective services.⁴⁷ A study commissioned by the National Indigenous Drug & Alcohol Committee estimated that the financial cost benefit through provision of alternative residential sentencing could save \$111,000 per person per year as well as a decrease in recidivism, mental health morbidities and infectious disease complications.³⁹ Finding local solutions and considering diversionary options for police, the courts and families to reduce the number of young offenders and repeat offenders such as those recommended in the Kimberley Juvenile Justice Report⁴⁰ may also offer long term social and economic benefits for the community, although significant upfront investment will be required.

Having undertaken this study and identified the perceptions, practices and needs in relation to FASD and justice in WA, we developed strong relationships with key stakeholders to translate the findings into tangible information and resources. Table 2 provides a list of education and training sessions conducted by project researchers for over 500 justice professionals in WA in the period 2013-2015. We ascertained what information was required and how this information should be delivered and we worked with judicial officers and lawyers to translate this research into a FASD educational intervention for justice professionals so that they can: 1) recognise cognitive impairments and possible FASD in young people engaging with the criminal justice system whether as a victim, witness or offender; or otherwise engaged in, or the subject of legal proceedings; 2) identify legal implications; 3) consider referral for assessment if

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the disability is suspected; and 4) consider decision making with respect to orders, sentencing and management. The educational intervention includes a series of short videos, an online continuing professional development module for lawyers, and updated information for the WA

Bench Book used by all WA judicial officers. These resources are available from the Alcohol, Pregnancy & FASD website '*FASD and Justice Professional Development*' page: <http://alcoholpregnancy.telethonkids.org.au/fasd-justice/professional-development/>

TABLE 2 Provision of education and training for justice professionals

Origin of invitation	Event	Audience
Aboriginal Family Law Services	Aboriginal Family Law Services - lawyers induction training	Lawyers
Aboriginal Legal Service (ALS)	ALS Annual Conference	Lawyers
ALS	ALS Lawyers' meeting	Lawyers – metropolitan and rural (via teleconference)
ALS	ALS Court Officers' Meeting	Metropolitan, regional and rural ALS Court Officers
Representative from the Australian Forensic Psychologists Association	Australian Forensic Psychologists' Association Conference	Forensic psychologists
Children's Court magistrate	Children's Court Magistrates' meeting	Children's Court Magistrates
Department of Corrective Services (DCS)	DCS State wide meeting	Staff from DCS offices around WA, including youth justice officers and psychologists
DCS	DCS Services psychologists meeting	Psychologists from the mental health and risk assessment teams
Magistrate	District Court Magistrates Conference	Magistrates from across WA
Chief Justice	Heads of Jurisdiction meeting	The Chief Justice of WA, President State Administrative Tribunal, Chief Judge District Court, Chief Magistrate, President Children's Court, Director Magistrates Court Director Higher Courts, Director Court Security Director General Department of the Attorney General (DotAG), Director Court and Tribunal Services DotAG, Director Strategic Business Development DotAG
Magistrate and Legal Aid WA lawyer	Legal Aid WA Summer Series (x 2)	Family law lawyers
President of the Probation and Community Corrections Officers Association	Probation and Community Corrections Officers Association Annual Conference	Probation and Community Corrections Officers
Professor in UWA Law faculty	UWA Law School Birth, Life, Death and the Law (x 3)	University students
DCS	Youth Justice Board meeting	Board members and representative from DCS

In response to the statements from survey participants in this study, calls from all levels of the WA justice system and the community, and collaborations formed during this project, research has commenced on a feasibility study of screening, diagnosis and workforce development in the only juvenile detention centre in WA. This study will 1) develop a FASD screening test appropriate for use among youth entering juvenile detention; 2) evaluate the feasibility and effectiveness of screening and diagnosis for FASD among youth entering detention in WA; 3) estimate the prevalence of FASD among youth entering detention in WA; and 4) develop and evaluate a workforce development intervention for management of youth with FASD in detention.

Limitations of this Study

The response proportion of 23% to this survey limits the generalisability of the findings. Respondents may have been more interested, concerned and/or knowledgeable about FASD than non-participants, suggesting that the levels of knowledge estimated in this study may be higher than for all justice professionals.

CONCLUSIONS

This study has identified and described the existing FASD knowledge and practices within the WA justice system which are aligned with similar studies of judges, lawyers and prosecutors in Canada and Queensland. Generally we found the WA justice system to be inadequately prepared and resourced to consider FASD. The findings enabled researchers and justice professionals to recognise the critical gaps that exist such as: 1) the recognition of the neurocognitive impairments associated with FASD; 2) need for training and education to improve justice professionals understanding of FASD and how it impacts on people's journey through the justice system; 3) need for referral and assessment services; and 4) effective sentencing options. Importantly this study built constructive relationships between researchers and justice professionals across all sectors of the WA justice system which have fuelled the impetus for increased educational opportunities, system

change and further research to develop resources for justice professionals and to conduct a study to improve the identification and management of youth with FASD in the WA justice system.

Competing Interests

The authors declare they have no competing interests.

Author Contributions

All authors were part of the 'FASD: Knowledge, attitudes and practice within the WA justice system' project. RM and HJ together with representatives from each justice sector developed the on-line questionnaires; and RW, RM and HJ analysed the data. RM and HJ drafted the manuscript and all authors edited the manuscript. All authors read and approved the final version of the manuscript.

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