

BMJ Open Scoping review of employment resources for individuals with fetal alcohol spectrum disorder and justice involvement

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ABSTRACT

Objectives Individuals with fetal alcohol spectrum disorder (FASD) are over-represented within the justice system and have significant employment challenges. The primary aim of this scoping review was to ascertain available employment resources for FASD individuals particularly those involved in the justice system. Secondary aims were to determine available evidence-based interventions for the justice workforce and employment providers.

Methods *Eligibility criteria:* That the resource was (a) published between 1990 and 2021, (b) in English, (c) available electronically in full text, (d) focused on strategies for improving employment outcomes of individuals with FASD and (f) developed for those aged over 15. *Sources of evidence:* Electronic searches of the following databases were conducted: EMBASE, MEDLINE, PsycINFO, Scopus, Web of Science and Google Scholar. Grey literature was collected via the databases ProQuest Dissertations & Theses Global, OpenGrey, GreyNet International and Grey Matters. *Charting methods:* Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews reporting guidelines, a five-stage methodological framework was employed. A quality appraisal of identified resources was conducted. Data were summarised qualitatively using a content analysis method that allowed for analysis of specific terms/themes/concepts/resource elements that resources covered, as well as a quantitative analysis of their frequency.

Results An initial search identified 850 articles, 512 of which were obtained through online database searches, 321 through Google Scholar searches and 17 through google searches. Sixteen resources were identified as meeting inclusion criteria, including four peer-reviewed papers and 12 grey literature resources. Six of the resources extracted were deemed 'good' or 'strong' quality, with the remainder—all grey literature resources—being 'adequate' or 'limited'. None of the resources identified were empirically evaluated or could be implemented synergistically. Content analysis revealed common themes addressing FASD-related employment challenges and required supports.

Conclusions This review highlights the need for developing evidence-based employment-related resources for justice-involved people with FASD. Most of the 16 identified resources had a psychoeducational and

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This study adheres to recommended best practice approaches for conducting a scoping review and provides a comprehensive content analysis of the current literature to inform evidence-based employment programmes.
- ⇒ The findings make an important contribution to the wider literature by mapping out the breadth of employment-related resources that are currently available for people with fetal alcohol spectrum disorder (FASD).
- ⇒ An assessment tool was employed to clarify the quality of the evidence base of accessible resources.
- ⇒ No well-established cut-off score was available to delineate good from poorer quality resources.
- ⇒ Not all identified resources directly addressed workplace accommodations for justice-involved individuals with FASD, and resources focused on factors that lead to employment success instead of evaluating accommodations and support strategies specifically.

advocacy component and described typical employment challenges with specific supports and accommodations to maximise workforce participation. However, none had been empirically evaluated, underscoring the importance of future research in this area to better inform more responsive and evidence-based employment-related programmes.

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INTRODUCTION

Individuals with fetal alcohol spectrum disorder (FASD) are increasingly over-represented within the justice system (JS) with up to 60% engaging in unlawful acts and/or being incarcerated.^{1,2} More recently, the rate of justice-involved individuals with FASD was shown to be far higher (ie, 29–31%) than counterparts with no FASD (ie, 1.7–1.9%).³ In Australia, 36% of detainees within a juvenile detention centre met the criteria for FASD.⁴ Vulnerability to JS involvement in individuals



with FASD stems from a confluence of neurocognitive, social and systemic disadvantages.^{5 6} Furthermore, they often face a justice workforce with limited knowledge of FASD and how to manage problematic behaviour.⁷ This barrier can result in people with FASD frequently cycling in and out of the JS, with significant personal and economic costs.⁸ Nonetheless, two important factors have been identified as having the potential of breaking the cycle of recidivism, including (1) the provision of appropriate support by the JS workforce including employment assistance and (2) stable employment in the community.^{8 9}

FASD is a condition that has been associated with significant employment disadvantage.¹⁰ For example, nearly 40% of 726 individuals with FASD reported employment difficulties in part due to the neurocognitive impairments associated with this disorder.³ Interpersonal difficulties in a work context can also occur due to poorer socio-emotional functioning.¹¹ Additionally, other intrapersonal factors can interfere with vocational endeavours including mental health issues, medical problems and low academic achievement.¹² Having a cognitive disability and an offending history also confers a twofold risk of poor community reintegration post-release and of being denied equitable access to meaningful participation in activities, such as employment.^{13 14} This can be problematic as it has been shown that employment is important for social inclusion and connectedness, improved mental health, financial security and reducing the risk of offending behaviour and recidivism.^{15 16}

There is growing awareness of the need to implement employment-related support for individuals with FASD while they are still in the JS. For example, the Australian National FASD Strategic Action Plan acknowledged that the JS workforce is best placed to implement evidence-based models of care to divert justice-involved individuals with FASD away from prisons and into services and programmes.^{17 18} However, there are limited specialised programmes designed specifically for employers and the JS workforce to assist individuals with FASD to navigate their post-release transition into employment. Additionally, the number, type and comprehensiveness of available employment-related resources are unknown. Consequently, a scoping review was conducted to determine whether evidence-based employment resources have been developed for adults with FASD who have been involved in the JS. A better understanding of this literature can further inform and/or propel the design of more responsive employment-related programmes.

METHODS

Overview

In adhering to recommended best practice approaches, a five-stage methodological framework^{19 20} was employed. The five stages were the (1) formulation of the research questions, (2) identification of relevant studies, (3) selection of eligible studies, (4) charting of data and (5) collation, summarising and reporting of results. A protocol for

this scoping review was initially submitted to the Open Science Framework (OSF) on 13 April 2021 and updated on 31 October 2021.

Stage 1: formulation of the research question

This review focused solely on resources that are exclusively relevant for individuals with FASD who also have an offending background.

The primary question was:

What evidence-based strategies or interventions are available on how to best support individuals with FASD who have been involved in the JS to gain and maintain employment? Secondary questions:

1. What evidence-based strategies or interventions exist for the JS workforce to best support individuals with FASD with a JS background transition into employment?
2. What evidence-based strategies or interventions exist for employment services and/or employers to best support individuals with FASD with a JS background access employment?
3. What evidence-based strategies or interventions exist to best support individuals with FASD access sustainable employment?

Stages 2 and 3: identification and selection of relevant studies

Database searches were conducted between March and September 2021. Three key concepts were used to identify resources, which were FASD (Concept 1), Justice System (Concept 2) and Employment (Concept 3) (see [table 1](#) for the lists of keywords—combined using OR between synonyms and AND between categories of keywords). In addition, electronic searches of the following online databases were conducted: EMBASE, MEDLINE, PsycINFO, Scopus, Web of Science and Google Scholar. Online supplemental appendix A provides an overview of the search strategy used. Grey literature²⁰ was collected by one author (MN) via website searching as well as databases such as ProQuest Dissertations & Theses Global, OpenGrey, GreyNet International and Grey Matters.

[Figure 1](#) presents a Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) flow diagram depicting the study selection process. Publication formats considered for this scoping review and classed as resources included peer-reviewed journal articles (reviews/meta-analyses), brochures, pamphlets, factsheets, books, videos, applications, websites and podcasts. Strict inclusion criteria included that the resource was (a) published between 1990 and 2021, (b) in English, (c) available electronically in full text, (d) focused on strategies for improving employment outcomes of individuals with FASD and (f) developed for those aged 15 years or above. The rationale for the latter was that not all countries have separate youth and adult JSs, the age cut-off between youth and adult detention is variable across countries and, in many countries individuals in late adolescence are eligible to work.

Table 1 Keywords used in the searches

Concepts	Concept 1	Concept 2	Concept 3
Key terms	FASD	Employment	Criminal Justice System
	Fetal Alcohol Spectrum Disorder	Employ	Criminal Justice System
	Foetal Alcohol Spectrum Disorder	Occupation	Justice System
	Fetal Alcohol Syndrome	Employment Services	Justice
	Foetal Alcohol Syndrome	Employment Workforce	Jail
	FAS	Disability Employment Services	Gaol
	Prenatal Alcohol Exposure	Employment Outcomes	Prison
	Partial Fetal Alcohol Syndrome	Supported Employment	Detention centre
	Partial Foetal Alcohol Syndrome	Vocation	Incarcerate
	Partial FAS	Career	Imprison
	pFAS		Prison Officer
	Alcohol-Related Birth Defects		Correctional Officer
	ARBD		Correctional Services
			Custodial Workforce
			Criminal History
		Criminal Justice Workforce	
		Policing Workforce	
		Offending History	
		Justice Workforce	

All publications identified (including duplications) were stored, organised and managed using EndNote (Clarivate Analytics, Pennsylvania, USA). A two-step

screening process was then undertaken using Covidence (Veritas, Health Innovation) with two authors at each step to ensure rigour. The first step comprised screening all titles and abstracts retrieved during the searches. The first author (MMAN) screened all titles and abstracts, while the second author (KRP) screened 60%. Cohen's Kappa indicated 40% agreement between the authors, and disagreements were resolved by reaching consensus through discussion. At the second stage, full-text screening of resources identified as eligible in the first step was conducted against the inclusion criteria. Again, the first author (MMAN) screened all resources while two others screened 60% of the published, peer-reviewed literature (CFP) and grey literature (JPF). Cohen's Kappa indicated the level of agreement between both authors was only 39% due to a lack of clarity in the identified resources regarding target populations, intervention strategies and intended outcomes. Nonetheless disagreements were resolved through further discussions.

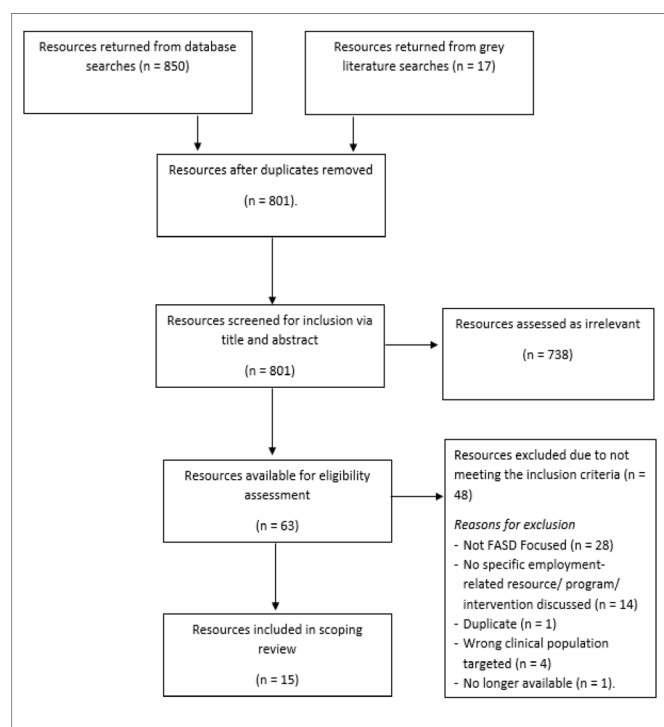


Figure 1 The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews flow diagram showing the study selection process. FASD, fetal alcohol spectrum disorder.

Stage 4: data charting and analysis

An amended version of the JBI Data Extraction Form for Experimental Observational Studies table (see [table 2](#)) was used to extract and summarise information from the literature identified as eligible based on the inclusion criteria. One author (MMAN) extracted the data for all resources while a second author (KRP) concurrently but independently carried out data extraction for 60% of resources. Results were cross-checked, and no disagreements emerged that needed to be resolved.

Table 2 Customised data extraction and charting tool for employment-related resources

Characteristics of primary studies	Bibliographical details from websites and grey literature
Title	Title
Author(s)	Author(s)
Year/country of publication	Year of publication
Context	Context
Resource/research article type	Resource type
Journal	Source
Volume	Country
Issue	Target population (employment agencies, disability employment agencies, employers, custodial workforce, correctional facility officers, case managers and clinicians)
Aims and purposes	Type of supports/resources/interventions
Study design	Key conclusion(s)
Target population (employment agencies, disability employment agencies, employers, custodial workforce, correctional facility officers, case managers and clinicians)	Has the resource been evaluated? If yes, provide details.
Sample size	Resource cost
Nature of offences	
Type of justice system involvement	
Intervention/type of employment-related support and comparator	
Type of employment	
Length of employment	
Barriers to employment	

Quality appraisal

A quality assessment of identified resources was also conducted using a tool developed by Lees and colleagues²¹ which was adopted with permission. This tool represents a modified version of the National Health and Medical Research Council form²² and the International Centre for Allied Health Evidence Guideline Quality Checklist.²³ Tool items pertain to the evidence-base of the resource, its comprehensiveness/utility, relevance to the target population (ie, workforce, employment agencies, disability employment services), availability, currency (ie, published within the past 10 years), ease of use and source credibility. Each resource was rated on each item using a 3-point scale, with three denoting an 'excellent' score and 0 denoting a 'poor' score. Again,

one of the authors (MMAN) assessed the quality of all resources while a second author (CFP) assessed the quality of 60% of the resources. All disagreements were resolved through discussion, following which an overall score denoting quality was derived. Those scores represented combined percentages denoting the strength of the evidence-base for the resource, comprehensiveness and utility of the resource, its relevance, availability of the resource, its currency and the credibility of its developers. Given the lack of a standard set of criteria for establishing the strength of evidence, a similar approach to Lee *et al*²⁴ was employed and resources were categorised as strong (>80%), good (70–80%), adequate (50–70%) or limited (<50%).

Stage 5: collating, summarising and reporting the results

First, simple descriptive statistical analysis was employed to map the existing resources and address the research questions. The data charting and quality assessment tools were, respectively, employed. Second, using a content analysis method allowed for a qualitative analysis of specific terms/themes/concepts/resource elements that resources covered as well as a quantitative analysis of their frequency.

Patient and public involvement

No patients involved.

RESULTS

As shown on the PRISMA-ScR flowchart (see figure 1), an initial search identified 850 articles, 512 of which were obtained through online database searches, 321 through Google Scholar searches and 17 through google searches. The results of our searches in relation to the main aims of this review are addressed below.

Mapping the breadth of resources

In total, 16 resources met the selection criteria. An overview of these resources are provided in online supplemental appendix B (#1,²⁵ #2,²⁶ #3²⁷; #4,²⁸ #5²⁹ #6¹² #7³⁰; #8³¹; #9³²; #10³³; #11³⁴; #12³⁵; #13³⁶; #14³⁷; #15³⁸; #16³⁹). For the remainder of the review, included resources will be referred to by the above reference numbers.

None of the resources included tools or strategies aiming to specifically support individuals with FASD within a justice context. However, 13 of the resources targeted employers, employment professionals and/or disability employment services working with individuals with FASD (#2; #4; #5; #6; #8; #9; #9; #10; #11; #12; #13; #14; #15; #16). One other paper was not specifically targeted at either group, though it adopted an occupational perspective and identified factors influencing work integration in a mixed sample of individuals with acquired brain injury, mental illness and intellectual disability, all of which could possibly include people with FASD (#7). One resource (#9) incorporated an employment guide that provided practical tools for employment

professionals supporting individuals with FASD. In this resource, a chart designed to evaluate the well-being of individuals with FASD prior to and during employment included three items regarding consideration of legal issues (#9).

Of the 16 resources, 4 were peer-reviewed publications including journal articles (#1; #6; #7; #12). One article described strategies identified by individuals with FASD as being explicitly associated with employment success (#6). A second identified the main elements on which community-based interventions (including employment-related interventions) for adults with FASD should be developed (#12). A third paper pertained to factors that facilitate work integration among clinical groups that overlap with FASD (#7). Finally, the fourth article described strategies that the custodial workforce can implement to promote positive interactions with individuals with FASD, though reference to employment outcomes was missing (#1).

The other 12 resources were extracted from the grey literature. Of these, 4 resources were developed based on empirical evidence, including pre-established evidence and qualitative analyses (eg, of survey data and interviews) on what constitutes employment success for individuals with FASD (#8; #9; #14; #15). These resources included a training manual to support vocational rehabilitation services targeting First Nation Americans with FASD (#8), a guide for employment professionals (#9), a webinar for employers including promising approaches to support the employment of people with FASD (#14) and, a Master's thesis (#15). The remaining seven resources were all freely available online and relevant to employers (#2; #3; #4; #5; #11; #13) but did not mention having been empirically evaluated or being based on pre-established evidence. Six of these resources were developed in the USA (#1, #2; #5; #8; #10; #14), eight in Canada (#4; #7; #9; #11; #12; #13; #15; #16) and one in New Zealand (#2).

Quality assessment of extracted resources

Overall, quality assessment yielded ratings that ranged from limited to strong (see online supplemental appendix B). Among the peer-reviewed publications, two of the four articles extracted were of good quality (71%; #1 and #6) and two were of strong quality (ie, 86% and 81% for #6 and #12, respectively). Of the 12 resources extracted from the grey literature, 1 was of limited quality (#16), 8 were adequate (62%; #3; #4; #5; #8; #10; #13; #14; #15), 1 of good quality (76%; #2; #11) and 1 was deemed to be of strong quality (ie, 86%; #9). As outlined in online supplemental appendix A, the absence of a clear link between FASD, justice background and employment-related strategies was the most common factor impacting the quality of the publications. In addition, for most resources, there was no clear evidence that the proposed strategies had been evaluated as effective or were based on empirical evidence (#1; #2; #3; #5; #6; #7; #10; #13; #16). Other factors impacting quality included being outdated (older

than 10 years old; #8) and lacking information regarding 'the authors' credentials and funding sources.

Content and outcome of any existing resources (if those have been empirically evaluated for their effectiveness)

As mentioned above, all 16 resources were developed based on pre-existing knowledge of FASD and general principles for supporting employment. As such, a content analysis of these resources was undertaken to systematically organise the information into a concise summary of key information.⁴⁰

Content analysis

The content analysis revealed some differences in the information covered in peer-reviewed and the grey literature. Across both sets of literature, there were themes around *FASD-related employment challenges* and *employment-related supports*, as well as *strategies and accommodations for engagement* in employment and justice contexts. Specific to the peer-reviewed literature, there were additional themes around *benefits of employment* and *factors promoting employment success and strategies for the justice workforce* to engage better with individuals with FASD. The grey literature also commonly provided psychoeducation around FASD more broadly, though this will not be covered in the descriptions below.

Employment-related challenges faced by individuals with FASD

Two peer-reviewed articles (#6; #7) and eight grey literature resources (#2; #3; #8; #10; #11; #14; #15; #16) mentioned potential barriers to work success in individuals with FASD. These were identified as being specifically related to deficits in their (a) *adaptive skills* such as personal care, social and workplace skills (#3), (b) *cognitive challenges* that make working to an optimal/expected standard particularly effortful, including language and communication impairment, difficulties with attention, poor learning, memory and executive functions such as planning, organisation and impulsivity (#3; #6; #15), (c) *financial difficulties* such as not being able to afford transport (#2; #3) and (d) *loss or lack of relational supports* such as discontinuation of job coaching, losing a supportive boss, poor communication, poor supervision, absence of adequate training or preparation when the tasks change or the individual is given a promotion (#3). Other interpersonal challenges included the attitudes and behaviours of others in the workplace towards the individual with FASD (#3; #6; #10). Examples provided of these included preconceived negative expectations (#3) and teasing or chastising by coworkers or customers (#10). It was also suggested that employers might be unaware of their legal obligations for employing individuals with a disability such as FASD and, therefore, may be uncertain how to accommodate the latter's needs (#7).

Employment supports

All resources included information about supports and accommodations to improve employment outcomes. Pre-employment supports were identified as necessary

to foster participation, engagement and a sense of confidence and control (#12). Adapting the workplace by providing necessary accommodations as well as making modifications to the physical environment were determined to be a precursor to employment success (#7; #12).

Resource #4 specifically described the Supported Employment model, which focuses on identifying a good fit between the employee's ability and work environment to maximise success. The tenet of this approach is that traditional employment models comprising lengthy periods of assessment and training should be foregone in favour of individualised guidance and supports as per the employee's specific needs and strengths (#4). Job fit was defined as to how well the employee is suited for the position and is a good match between the workplace, management style and the employee's abilities, interests, goals and skills. Factors underpinning job fit included having the right number of hours, low levels of workplace stress, a routine at work and lots of repetitions. Similar to this individualised approach to employing persons with FASD, LaDue and colleagues³¹ (#8) also argued for implementing an individualised plan for employment (IPE) by vocational rehabilitation services. The IPE plan comprises a written unique rehabilitation plan, including documentation around the person's workplace intake, assessment, eligibility and plan for services. A more recent resource #6 includes items that guide employment professionals in developing an awareness of job fit as an employment prerequisite.

In addition to the above, Resource #1 advocate for an individualised approach to providing services to individuals with FASD generally, and if possible, by consulting with experts in the field. Types of individualised supports discussed encompass having relational support (eg, medical and health professionals, support workers, mentors, friends and family) (#6; #12), practical supports (eg, with transportation, money management, grocery shopping, meal preparation and house maintenance) (#3; #4; #5; #8; #9; #11; #13; #14; #16), as well as supports that centre around providing structure and routine to the individual (#12). Other types of pre-employment supports were also proposed, including early job skills training based on individuals' strengths (#4), access to education and counselling, strategies to facilitate the work application process (eg, simplifying the application form, allowing the individual to complete the form at home, going over the application with them and helping them complete it) (#13; #14).

In terms of natural supports, *mentorship* is referred to as best practice in the workplace to help the individual to prepare for employment (eg, to write resumes, facilitate connections with relevant employment services, prepare for interviews), transition into the workplace and into daily routines which can increase productivity, one-on-one support and leadership, teach the individual with FASD about the organisation and help them forge strong working relationship (#13; #15). *Job coaches* are discussed as providing opportunities for positive reinforcement,

training reminders to stay on track and on task, social skills training and advocacy (#4; #8; #13). *Workplace buddies* are suggested as people who can help the person with FASD with transitions, advocate for the person in the workplace, answer questions as needed (#4; #14), provide guidance regarding social interactions and advice regarding health and safety expectations. *Job shadowing* is discussed to provide the employee with FASD low-key experience of the work duties and whether the role fits their skills and interests (#13; #14). Finally, *job carving* is advised to adapt or create new roles out of existing ones to suit the skills and strengths of the person with FASD (#9; #13).

Cognitive strategies were also commonly listed. These include accommodations and support strategies around difficulties with attention, communication, information processing, learning, memory, literacy, numeracy, executive dysfunction, reasoning/judgement/decision-making, time management and scheduling, social/interpersonal skills and emotion regulation (#3; #4; #5; #8; #9; #13; #14; #15; #16). Three resources stipulate that workplace strategies should be focused on minimising stress and mental health issues that could arise as a result of work, for instance, by allowing for flexibility in scheduling of work (#4), using simple language to improve understanding of information and productivity (#13) and resorting to various other strategies such as the provision of employee assistance programmes, access to applications for stress and anxiety, policy modifications, access to support animals or persons and working remotely (#5). Resource #5 and #8 provided several accommodations or modifications to the physical work environment that may work well with adults with FASD. In particular, they advocate for the use of well-defined spaces, putting things away in a clearly delineated space, removing extraneous materials from the workspace and limiting the number of objects and displays in a room at any one time. Resource #4 provides a list of items and tools that may be provided to the employee with FASD in helping them conduct their tasks. These tools include *handling/fingering* aids (eg, ergonomic equipment, anti-vibration gloves and grip aids), *office equipment* (eg, alternative keyboards, typing aids) and other aids such as having an assistant, perioding breaks and money handling tools.

Advocacy

Overall, one peer-reviewed (#6) and five resources advocated broadly for employing individuals with FASD, including creating a positive work environment that would support these individuals (#2, #4; #8; #14; #16). It was acknowledged that employment is a platform through which individuals with FASD could become advocates for their condition, including promoting awareness of FASD in the workplace, its impact on the brain and how diagnosed individuals can cope with their challenges (#6). Additionally, Resource #3 expressed that engaging in competitive and fulfilling employment may instil a positive self-identity, self-esteem and self-worth in the individual with FASD, as well as acting as a protective factor against

dependency and poverty in this group. A case is also made that individuals with FASD possess several strengths, skills and abilities that can benefit the workplace and society (#4). Positive personality traits commonly associated with FASD and described as advantageous in an occupational setting include gregariousness, curiosity, tenacity, friendliness, creativity, helpfulness and generosity (#4).

As part of advocating for employees with FASD, some resources encouraged the improvement of knowledge around FASD and the provision of appropriate accommodations to employees with FASD, highlighting that failure to do so can put pressure on the latter and create unattainable expectations (#4). Tips and information regarding how employers, supervisors and colleagues can challenge attitudes and behaviours towards employees with FASD are noted. For instance, Resource #13 dispels some common myths and misconceptions around FASD, including regarding attributes of people with FASD (eg, being lazy and careless). Training is cited as an important way for employers to improve their knowledge of FASD, learn about appropriate models of disability employment, what accommodations to provide and how to set realistic goals and expectations to increase the 'individual's chances of success' (#4).

Benefits of employment

Two peer-reviewed resources discussed the benefits of employment (#6; #7). Notably, promoting the employment of individuals with a disability (including FASD) is described as providing an opportunity to break down the social and legislative barriers that have historically denied those individuals equal employment (#7). As such, the authors encouraged policymakers, researchers and disability advocates to consider work as a key priority at individual, programme and societal levels. Employment was also seen within a rehabilitation framework as a factor that emphasises hope, growth and development and provides a shift in perspectives from pathology to one of engagement and of access to opportunity for people with FASD. Resource #6 also recognised that employment could carry many positive impacts on the life and well-being of individuals with FASD, including improving self-esteem, increasing opportunities for social interactions and building a sense of autonomy.

Factors that promote employment success

Three published resources discussed factors that could promote employment success in disability, including FASD (#6; #7; #12). Resource #6 found that most people with FASD do not disclose their diagnosis in the workplace, although they frequently perceive that this would improve their colleagues' understanding of FASD and instil empathy and reduce stigma. Disclosure of an FASD diagnosis was described as a means of acquiring the supports (ie, accommodations and supports) required in the workplace as well as the skills necessary to respond to challenges at work. In light of the discrepancy between the perceived benefits of disclosing an FASD diagnosis

and the reasons why this is often not done, #6 calls for better awareness and education of FASD for employers as well as the development of best practices around disclosure of diagnosis in the workplace. Consistent with this perspective, #12 suggested that individuals with FASD may lead more meaningful lives and receive better support when service providers receive more formal training and psychoeducation.

Strategies for improved interactions with individuals with FASD (for the justice workforce)

Finally, (#1.) provided some strategies to the justice workforce to improve their interactions with individuals with FASD (though these are not necessarily related to improving employment outcomes directly). For instance, they recommended that the justice workforce target accommodating the needs of individuals in custody with FASD. One example of such an accommodation pertained to adapting to the communication level of the individual. Using direct and concrete language, speaking slowly and repeating information were encouraged language-related accommodations.

DISCUSSION

This scoping review aimed to identify existing, evidence-informed employment-related resources that can be implemented with individuals with FASD who have a background of JS involvement. A total of 16 resources (including journal articles, webinars, guidelines, manuals, web pages) were selected, including four peer-reviewed papers and 12 grey literature resources. Six of the resources extracted were deemed of 'good' or 'strong' quality (#1; #2; #6; #7; #9; #12) with the remainder—all being grey literature resources—being 'adequate' #3; #4; #5; #8; #10; #11; #13; #14; #15) or 'limited' (#16). A major observation was that none of the resources empirically evaluated specific employment-related strategies for individuals with FASD and a JS background. Additionally, none of the 16 resources encompassed strategies and accommodations that could be implemented synergistically for all three of the target groups in combination (ie, the justice workforce, employment professionals and employers) to facilitate the transition of individuals with FASD from the JS into meaningful and sustainable employment. In fact, this scoping review also showed a dearth of resources available in this area. One exception was an employment guideline that included a chart developed to assess the well-being of clients with FASD (#9). This resource included items that prompt employment professionals to consider existing legal issues as a possible factor that could impact on work and to consult with other professionals involved with the individual with FASD (#9).

Content analysis of the resources revealed that together, both peer-reviewed and the grey literature resources covered information that broadly revolved around: definitions of FASD, common employment-related challenges,

advocacy, a description of their strengths and factors that may promote employment success, types of employment supports including tips and strategies.

Cognitive challenges that may interfere with employment are outlined in all resources and align with those documented in the literature.^{41,42} These challenges pertain to attentional difficulties, a proneness to becoming easily fatigued, losing concentration, being prone to making errors, exhibiting difficulties acquiring new skills, failing to plan and organise their tasks appropriately, inefficient and/or poor problem-solving and experiencing social/interpersonal difficulties (#6). Acknowledging challenges in FASD is important as it allows others to become aware of difficulties that the person with FASD may exhibit while appreciating that these difficulties are varied and may not be evident daily.⁴³ Increasing knowledge of challenges that people with FASD face at work has also been described as a way of promoting empathy and reducing stigmatisation in the workplace (#6).

Additionally, individuals with FASD are vulnerable to social challenges that can impact their employment and longevity. For instance, some resources recognise that individuals with FASD may not always receive or have access to the relational support they require (#3). Relational supports, including family members, support workers, workplace mentors etc, are also discussed as an important condition promoting employment success among individuals with FASD (#6). When provided, the benefits of such supports are numerous but more importantly, they relate to providing the individual with FASD help with practical daily living tasks, transportation, self-care, motivation and teaching the skills necessary to perform work duties (#6). In contrast, the absence of such supports can be detrimental to successful employment and further reinforce the occupational disadvantage that those individuals commonly encounter. Moreover, the effects of poor relational support can be compounded by stigma vis-à-vis people with FASD in the workplace.⁴³

Stigma can dissuade individuals from seeking the supports they need to carry out their tasks to an optimum level and can consequently deprive them of rightful opportunities to engage in meaningful and sustainable employment.^{44,45} Furthermore, historically, individuals with mental health conditions have been denied equal opportunities to work since their disability is invisible, their skill sets may not be easily identifiable and others may view them as incompetent and judge them more harshly than individuals who do not have mental health conditions. Employers with those negative views of disability can be reticent to hire individuals with the condition.⁴³ Employers may even be unwilling to provide the required accommodations for employees with FASD, thinking that the costs of implementation are higher than they actually are.⁴³ Some employers may also be unaware of their legal obligations to provide accommodations for people with disability.⁴³ Such negative views and attitudes regarding the competencies of individuals with disabilities (eg, FASD) and

the accommodations that can be implemented in the workplace may in and of themselves render the person 'work disabled' and interfere with their chances of developing the necessary skills to gain and maintain employment in the long-term.

Given the above social and interpersonal challenges faced by employees with FASD, employers, disability employment professionals, probation and parole officers and other relevant organisational members (eg, JS workforces) should be educated and knowledgeable about the social challenges experienced by individuals with FASD. Enhanced awareness of those difficulties, for example, through the dissemination of relevant information in employment-related resources can lead to employers and employment professionals to adapt their processes, interactions and expectations of the individual and, as such, create a workplace culture, that is, accommodating, supportive and free of psychological barriers^{28,43} (#6; #9). This can, in turn, lead to positive outcomes in employees with FASD such as long-term employment, independence, a sense of autonomy and social connections²⁸ (#6; #9).

When it comes to the justice workforce, including judges, lawyers, police and custodial personnel, knowledge of the cognitive challenges that are inherent to FASD is important, so that tailored supports and care can be implemented during pre-sentencing and incarceration periods.⁷ Therefore, including psychoeducation about FASD in any training resource developed for the justice workforce is paramount for implementing tailored supports, including pre-release employment-related supports.⁷ While prisons do offer vocational training and employment programmes, these do not appear to be tailored to individuals with specific disabilities such as FASD. Based on our search of the literature, we found that there are currently no training programmes around the world for the custodial workforce that incorporate knowledge of FASD and its challenges with a specific intention to educate about how to best support individuals with FASD in their transition into employment post-release.

While knowledge of cognitive difficulties in FASD represents important information for the justice and vocational workforce, so is knowledge of strengths that individuals with the condition may have. Such a strengths-based approach is in line with principles of adopting an FASD-informed approach to practice and programming, whereby FASD is not to be viewed as a disability with global impairments but one that is diverse and encompasses strengths as well as limitations (#14). An emphasis on the skills and talents of individuals with FASD can shift the focus of service systems and programmes away from standard deficit-focused approaches and unjust penalising of individuals based on their difficulties towards fashioning events that build on their strengths and allow them to thrive (#14). Recognising that individuals with FASD also have strengths can lead to problem behaviours being reframed, more positive relationships being forged with individuals with FASD and the latter feeling more empowered in the workplace (#6; #14).

Finally, the resources all discuss strategies to support and accommodate the employment needs of individuals with FASD in such a way as to help them maximise their strengths, however minimal guidance was provided on how to identify an individual's strengths (eg, via personalised vocational assessment and/or neuropsychological assessment). Providing information regarding supports and accommodations for individuals with disabilities such as FASD is vital as employers often have limited knowledge of disability discrimination legislation.⁴⁶ Moreover, there may also be concerns from employers that the cost of implementing supports may be high, thus impacting their decisions to hire an employee who may require them.⁴⁶ However, it is now acknowledged that the financial costs of providing supports and accommodations are typically low or, in many cases can be nil, particularly when those involve adjustments in behaviours and attitudes towards the individual with a disability and/or providing natural supports.⁴⁶ It is also apparent that a business may have indirect costs, such as time allocated to providing additional supervision or frequent breaks.⁴⁶ Nonetheless, the provision of accommodations to employees who need them is associated with long-term benefits such as significant improvements in work ability and longer job tenure.⁴⁶ Hence, the benefits of implementing supports may outweigh the relatively minor costs of doing so. From this perspective, educating the vocational workforce about the specific types of accommodations they may provide to the individual with FASD is a worthy endeavour.

This scoping review should be interpreted within the context of its limitations. First, not all the resources included in this review directly addressed workplace accommodations for justice-involved individuals with FASD. Some of the resources selected, more specifically, peer-reviewed journal articles (eg, #6), were focused on identifying factors that lead to employment success instead of evaluating accommodations and support strategies specifically. It is also possible that some resources may have been missed due to keyword selections. A second limitation relates to the assessment of the quality of resources that were included in our final analysis. In particular, there were no well-validated tools that could be used, but more importantly, no well-established cut-off score was available to delineate good from poorer quality resources. It is acknowledged that the primary intention of conducting a scoping review is not to assess how favourable one particular source of evidence or resource is over another/others, but instead, the focus of those reviews is on describing the scope of information on a particular topic, the source of the information and its content where possible. However, quality was assessed here to clarify the quality of the evidence base of the limited number of accessible resources.

CONCLUSION

This scoping review identified 16 employment resources that can be implemented to support individuals with FASD

and justice backgrounds transition into employment. None of these resources directly targeted the justice workforce, however future work around developing evidence-based employment-related resources for this cohort will be of benefit. Nonetheless, the resources extracted were mainly from the grey literature and adequate in quality, while a smaller number were collected from academic database searches. Content analysis revealed that together, most resources provided background information informing target audiences about the disorder, described the main challenges people with FASD experience in the workplace, advocated for the employment of people with FASD highlighting their strengths and the benefits they bring to the workforce and providing specific supports and accommodations that can be used to minimise difficulties and maximise workforce participation in individuals with FASD. These themes highlight important components to include in more responsive employment-related programmes targeting justice-involved individuals with FASD.

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