FASD Prevention Literature Search 2020 – Executive Summary

Introduction

Annually, researchers associated with the Prevention Network Action Team (pNAT) of the CanFASD Research Network search the academic literature for articles related to Fetal Alcohol Spectrum Disorder (FASD) prevention. The findings are organized using a four-level prevention framework used by the pNAT to describe the wide range of work that comprises FASD prevention. The annual literature search is intended to update those involved in FASD prevention in Canada to help them inform their practice and policy work with current evidence. The members of the pNAT also have the opportunity to discuss the implications of the findings for their work in monthly web meetings.

Search Methods

Seven databases were searched using Ebsco Host for articles published between January and December 2020. All searches were limited to articles published in the English language. Articles were further screened for relevance to the FASD pNAT and non-relevant articles (e.g., diagnosis of FASD) were removed from the list. Articles were then categorized into one or more theme, as presented below.

Search Results

One hundred and three (*n* = 103) articles were included from our searches. Three (*n* = 3) articles were assigned to more than one category, three (*n* = 3) were attributed to more than one country, and one (*n* = 1) was regional. Table 1 provides an overview of the number of articles found in each topic area by country. Table 1 demonstrates that in the past year, research on FASD prevention, published in English, was most often being generated in the United States of America (US), Canada, and Australia.

Table 1: Studies identified by topic and country

	Number of Studies						
Country	**Prevalence and Influences**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Other**	**Total**
Australia	2	2	6	1	0	3	**14**
Brazil	1	0	0	0	0	1	**2**
Canada	3	1	5	4	2	2	**17**
Denmark	0	0	1	0	0	0	**1**
Ethiopia	3	0	0	0	0	0	**1**
Germany	0	1	0	0	0	0	**1**
Ireland	0	0	1	0	1	0	**2**
Italy	0	0	0	0	0	1	**1**
Japan	1	0	0	0	0	0	**1**
New Zealand	1	0	2	0	0	0	**3**
Republic of the Congo	1	0	0	0	0	0	**1**
South Africa	3	0	1	0	0	0	**4**
Spain	2	0	1	0	0	0	**3**
Sub-Saharan Africa	1	0	0	0	0	0	**1**
Switzerland	0	0	1	0	0	0	**1**
The Netherlands	0	0	0	0	0	1	**1**
UK	1	0	3	3	1	1	**8**
US	17	0	14	4	3	6	**44**
Uruguay	1	0	0	0	0	0	**1**
	37	**3**	**33**	**12**	**7**	**14**	**106**

A. Prevalence of, and influences and factors associated with, drinking in pregnancy

Thirty-seven articles (*n* = 37) explored the prevalence of, and influences and factors associated with, alcohol use during pregnancy. The majority of studies were cross-sectional (*n* = 19), followed by cohort (*n* = 9), mixed methods (*n* = 4), qualitative (*n* = 1), systematic review and meta-analyses (*n* = 1), secondary analysis (*n* = 1), randomized controlled trial (*n* = 1), and editorial (*n* = 1).

Factors that impacted alcohol use in pregnancy included:

- Depression [1-3]
- Partners' alcohol use [1, 4, 5]
- Knowledge of the harms of alcohol use [1, 6, 7]
- Pregnancy awareness/if pregnancies were planned [1, 6, 8-10]
- Adverse Childhood Experiences (ACEs) [11-13]
- Availability of support networks [5, 14]
- Personality traits (i.e., extraversion, openness to experiences) [15, 16]
- Level of education [3, 5, 6, 8, 10, 16]
- Smoking during pregnancy [8-10, 17, 18]
- Density of alcohol establishments [4]

One article, examining recall bias, found that women's recall for prenatal experiences, behaviours, and outcomes was moderately consistent between 6 months and 8 years postpartum. Mothers recall was consistent for type of delivery, smoking and marijuana use during pregnancy, specific medical concerns during pregnancy, and medicine used for induction but only fair for alcohol use, illicit substance use, and the use of drugs other than an epidural during labour [19].

B. Level 1 Prevention

Three articles (*n* = 3) described Level 1 FASD prevention efforts. The study designs included a content analysis (*n* = 1), editorial (*n* = 1), and time series (*n* = 1). One Australian study found an increase in messaging (2007 – 2017) that discouraged drinking during pregnancy – citing children's harms and prevention initiatives – and an increase in articles presenting mixed advice [20]. A second Australian study found that the alcohol industry interfered with recent efforts to bring evidence-based, full colour health warning labels onto alcohol products, counter to the opinions of both the general public and 150 public health and medical bodies [21]. A Canadian study found that alcohol sales decreased following a shift in warning labels to include a cancer warning, low risk drinking guidelines, and standard drink messages. This Canadian study similarly found that when pregnancy warning labels were reintroduced, there was an even greater reduction in alcohol sales [22].

C. Level 2 Prevention

Thirty-three articles (*n* = 33) described Level 2 FASD prevention efforts. The majority of studies were cross-sectional (*n* = 14), followed by cohort (*n* = 4), mixed methods (*n* = 4), qualitative (*n* = 4), systematic review and meta-analyses (*n* = 2), secondary analysis (*n* = 1), before and after (*n* = 1), clinical trial (*n* = 1), randomized controlled trial (*n* = 1), and guidelines (*n* = 1). Findings indicated that screening and brief intervention delivery were dependent on health behaviour (e.g., screening for tobacco was more common that screening for alcohol use) [23, 24]. Similarly, practitioners who screened for all substances were more likely to screen for alcohol use in pregnancy compared to their counterparts [16].

While some evidence demonstrated that brief interventions did not significantly influence maternal or neonatal outcomes, there was evidence of effectiveness when partners were involved and among subgroups of women who consumed larger amounts of alcohol or engaged in polysubstance use [25]. Moreover, dual interventions focusing on sexual health and alcohol use helped facilitate trust and relationship-building and facilitated discussions about alcohol use in pregnancy [26, 27].

Some barriers to brief interventions cited by health and social care providers included:

- Availability of screening tools and alcohol use guidelines [28, 29]
- Adequate support and training to screen [29]
- Confidence and competence [28-30]
- Knowledge of alcohol use limits and effects of alcohol use in pregnancy [29-31]
- Knowledge and capacity to refer to supports following screening [29, 31]

Further, women's education and race continue to have an impact on screening practices. In a study of teenage mothers in the US, Black teens were more likely receive substance use and HIV counselling [32] and Hispanic teens were more likely to receive counselling on influenza vaccine recommendations compared to White teens [32].

D. Level 3 Prevention

Twelve articles (*n* = 12) described Level 3 FASD prevention efforts. The majority of studies were mixed methods (*n* = 3), followed by secondary analysis (*n* = 2), systematic review and meta-analyses (*n* = 2), scoping review (*n* = 1), exploratory (*n* = 1), descriptive (*n* = 1), qualitative (*n* = 1), and randomized controlled trial (*n* = 1). Study settings varied from mental health and substance use treatment centres (*n* = 4) and multidisciplinary substance use and pregnancy programs (*n* = 3) to home visitation programs (*n* = 1). Despite the successes of level 3 programs in reducing prenatal substance use and improving mindfulness and wellbeing [33], researchers from the US identified that the majority of pregnant women with mental health or substance use disorders do not receive treatment or access to services that address their multiple needs [34, 35]. Additionally, research related to Level 3 prevention underscores the need for multidisciplinary and collaborative strategies, such as those identified in Canada [36, 37] and Wales [38] that respectfully and flexibly respond to women's diverse needs.

E. Level 4 Prevention

Seven articles (*n* = 7) described Level 4 FASD prevention efforts. Studies were mixed methods (*n* = 2), qualitative (*n* = 2), secondary analysis (*n* = 1), scoping review (*n* = 1), descriptive (*n* = 1), and implementation science (*n* = 1). Level 4 programs, such as the Parenting Under Pressure (PuP) program in Ireland [39], the Team for Infants Exposed to Substance abuse (TIES) program in the US [40], and programs included in the Co-Creating Evidence study in Canada [36], facilitated improvement in women's confidence in their ability to parent; relationships with care providers; and, helped reduce child and infant removals. Home visitation programs were further cited as having the capacity to provide early interventions in focusing on the transitional period from pregnancy to postpartum in a way that is relationship-based, reliable, culturally responsive, personable, and collaborative [41].

One scoping review of available research from Australia, Canada, New Zealand, and the US on parenting programs for Indigenous families impacted by substance use further highlighted the role of culturally safe and strengths-based programming in supporting wellness. Key considerations contributing to positive outcomes for Indigenous families were: 1) self-determination of families and communities; 2) connection to culture and values; 3) healing from historic and intergenerational trauma; 4) building trust through cultural safety; and 5) seeing pregnancy as a critical period to offer substance use services [42].

F. Other – stigma, ethical issues, and systemic approaches

Literature captured in this final section was diverse with article types ranging from innovations in the field to editorials, debates and systematic and narrative reviews. Key findings emphasize that there is still work to be done to raise awareness on FASD and alcohol related harms, particularly among health care providers, to further prompt efforts to screen and provide brief interventions that are characterized by non-judgmental and non-directional advice, and that promote alcohol reduction and social support [43].

Further, there is a continued need to situate alcohol use during pregnancy in women's socioeconomic and structural contexts. Preconception health efforts need to be more expansive to integrate partners and communities, recognizing their influential role in preconception health [44]. Additionally, there is a need to acknowledge and address the immense impact of stigma on access to preconception health and substance use services; services should be empowering, attend to diversity, and respond to the complexities of women's lives [45, 46].

For more information about FASD prevention research see https://canfasd.ca/. The authors may be reached at cewh@cw.bc.ca.

The full annotated bibliography is downloadable from https://canfasd.ca/topics/prevention/ or http://bccewh.bc.ca/category/post/maternal-health-and-substance-use/

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