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2012 FACE POSTER COMPETITION ABSTRACTS

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2012 FACE RESEARCH ROUNDTABLE POSTER COMPETITION ABSTRACTS

1.

The power of networking – Highlights of the work of Canada's Network Action Team on FASD prevention from a women's health determinants perspective

Poole, N

BC Centre of Excellence for Women's Health and the Canada FASD Research Network

Background: The aim of this presentation is to profile Canadian examples of FASD prevention activities from across research, policy, and practice which are linked through a Network Action Team (NAT) on FASD Prevention, funded by the Canada FASD Research Network. This poster will provide an overview of the virtual community of practice (CoP) model and illustrate the strategies that have allowed the NAT to work collaboratively across time and geographies.

Methods: Over the past six years, the NAT has been building a virtual network of over 40 researchers, health care/other service providers, community based advocates and parents, and decision makers/health system planners from across Canada. Team members lead academic and community-based research projects, hospital and community based programs, evaluation studies, a blog on women, alcohol, and pregnancy, and other local and national initiatives.

Results: The NAT has utilized a virtual Community of Practice model as a mechanism for knowledge exchange, engaging researchers, policy makers, civil servants, clinicians, community-based service providers, advocates, and women concerned with FASD prevention. As the Network continues to grow with interest from new communities and stakeholders, additional strategies for maintaining effective working relationships and for ensuring the smooth uptake of knowledge into program and policy development are being explored.

Conclusion: Virtual and collaborative approaches to promoting women's health can be an effective strategy for preventing FASD and allows researchers, policy makers, and advocates from multiple sectors to better address the range of proximal and distal factors that influence alcohol consumption during pregnancy.

Keywords: *Virtual Community of Practice model, FASD prevention, collaborative and community-based programming*

Source of funding for the study: Canada FASD Research Network

Conflict of interest: The author declares no conflict of interest.

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2.

Now you see me, now you don't – Service delivery to FASD offenders in Saskatchewan Community Corrections

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Background: FASD offenders involved in community corrections come with a variety of challenges. One of the challenges facing community corrections practitioners is how to best provide service to FASD offenders. What would the components of a service delivery program include in order to most effectively meet the needs of FASD offenders receiving existing services from Saskatchewan Community Corrections?

Methods: Utilizing case study methodology, this research explored the intersection of present day service delivery practice and proposed future practices as demonstrated by the Strategic Training Initiative in Community Supervision (STICS) project. Interview sampling of two sub-groups of research participants was employed. Conducting one-on-one interviews with those involved in the STICS project and the implementation of community corrections policies comprised the first sub-group. Interviews with those involved in the criminal justice system with FASD expertise (ie. lawyers, judges, police, etc.) comprised the second.

Results/Conclusion: Using a thematic network as a thematic analysis tool for qualitative data, this research identified limitations within community corrections and the STICS project that would need to be addressed

to ensure success in providing community corrections service to FASD offenders.

Keywords: *Community Corrections, Case Study, Thematic Analysis, Strategic Training Initiative in Community Supervision (STICS)*

Source of funding: None

Conflict of Interest: The author declares no conflict of interest.

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3. **Everyday memory impairments in children and adolescents with Fetal Alcohol Spectrum Disorder**

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Background: Everyday memory (EM) allows one to successfully perform real-world tasks across a variety of domains. An important component to successful use of EM involves an intrinsic motivational factor rooted in social cognition, such as not wanting to let someone down or understanding how another would feel. However, these social cognitive skills are often impaired in youth with FASD. Despite its critical functional relevance, EM has received limited attention in relation to youth with FASD and may underlie some of the social difficulties that they experience. The current study explored whether significant differences exist in EM between youth with an FASD diagnosis compared with a typically developing control group.

Methods: A secondary analysis was conducted on scores of EM as measured by the Everyday Memory Questionnaire from youth between the ages of 9 and 15 years with an FASD diagnosis (N = 41) and a typically developing control group (N = 47). Non-parametric Mann-Whitney U Tests were performed for between group comparisons.

Results: Significantly lower scores were found across all domains of EM measured in youth with FASD, including retrieval memory, task monitoring, conversational monitoring, spatial memory, and memory for everyday activities ($p < 0.01$ for all comparisons).

Conclusions: Poorer performance across a variety of EM skills were evident in youth with FASD compared with controls. Insight gained from this study will allow

for a better understanding of the specific cognitive challenges faced by these youth and can have implications for guiding treatment and interventions to promote social functioning.

Keywords: *Secondary data analysis, everyday memory, social cognition*

Source of funding: Canadian Institute for Health Research (CIHR)

Conflicts of Interest: The authors declare no conflict of interest.

Student/Trainee: Presenting author Sabrina Agnihotri is a full-time Ph.D. student.

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4. **Cortical morphology in children with Alcohol-related Neurodevelopmental Disorder**

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Background: Children exposed to alcohol in utero show reduced cortical volumes. However, the underlying determinants of these reductions have not been investigated in alcohol-related neurodevelopmental disorder (ARND), a prevalent fetal alcohol spectrum disorder subgroup that lacks marked facial dysmorphologies.

Methods: T1-weighted magnetic resonance imaging scans were obtained from 121 participants (8-16 years), 57 diagnosed with ARND and 64 typically developing controls. Scans were submitted to the CIVET pipeline (version 1.1.10). Group differences in cortical thickness, surface area, and gyrification were analyzed using a general linear model covaried for age, sex, acquisition protocol, and handedness.

Results: Groups did not differ significantly in cortical thickness. However, the ARND group showed reduced total brain volumes ($p = 0.001$); reduced grey matter volumes in bilateral frontal lobes ($p = 0.002$, $p = 0.002$), bilateral parietal lobes ($p = 0.006$, $p < 0.001$), and the right temporal lobe ($p = 0.001$); smaller surface areas in the bilateral frontal ($p = 0.001$, $p < 0.001$) and temporal lobes ($p < 0.001$, $p < 0.001$); and reduced total gyrification. Local reductions in surface area were observed in the right temporal lobe ($p = 0.009$),

particularly in the right superior temporal gyrus and the right temporo-occipital region. A significant interaction between sex and group on global cortical grey matter volume ($p = 0.048$) and surface area ($p = 0.034$) was observed.

Conclusion: ARND is characterized by global reductions in cortical surface area and gyrification and females are more vulnerable than males to the teratogenic effects of alcohol.

Keywords: ARND, cortical thickness, MRI, surface area

Source of funding: Canadian Institutes of Health Research (200810MOP-203919, 101009MOP-229653, and NET-54014) to JR, and Hospital for Sick Children RESTRACOMP scholarship to MR.

Conflict of Interest: The authors declare no conflict of interest.

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5.

Service utilization patterns among children and adolescents with Prenatal Alcohol Exposure and Fetal Alcohol Spectrum Disorder

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Background/Objectives: Although receiving services for developmental disabilities is a strong protective factor against negative outcomes in FASD, there is little research on service utilization patterns among individuals with FASD. The goal of the current study was to examine rates of service utilization among children with FASD and those with confirmed prenatal alcohol exposure (PAE) without an FASD diagnosis. Service utilization patterns were compared across diagnostic group, diagnostic assessment before age six vs. after age six, and residential location (urban vs. rural).

Methods: Caregivers of 46 children with FASD and 26 with PAE were interviewed using the Services for Children and Adolescents Parent Interview (SCAPI). The SCAPI collects information about child medication, individual child therapy, parent/family therapy, education services, parenting classes/groups, and parent

medication. Questions about respite and early intervention were added.

Results: The most frequently used services among both diagnostic groups were education services, child medication, child therapy, and parenting classes. The groups differed in access to educational support (accessed more by FASD) and parenting classes/groups (accessed more by PAE). Children assessed before age 6 had better service access than those diagnosed later in areas of early intervention, parent/family therapy, and parent medication whereas a greater proportion of those diagnosed after age 6 accessed respite. Service access did not differ between urban and rural participants.

Conclusions: An FASD diagnosis instead of just confirmed PAE does not generally seem to increase overall rates of service utilization. Furthermore, geographic location has little effect on service utilization. However, being diagnosed before age six appears to be associated with better service access.

Keywords: FASD, prenatal alcohol exposure, service use

Source of funding: Canadian Institutes of Health Research (CIHR)

Conflict of Interest: The authors declare no conflict of interest

Student/Trainee: K. Kully-Martens is a Master's student at the University of Alberta

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6.

Examining the validity of the Asante FASD Screening and referral tool for youth probation officers in justice involved youth

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University of Alberta¹; Simon Fraser University²

Background: The need for FASD assessment and diagnostic services is high in justice settings where rates of prenatal alcohol exposure (PAE) appear prevalent. However, diagnostic capacity and resources are scarce, underscoring the need for valid screening tools to identify individuals appropriate for complete assessments.

Objective: To assess the sensitivity, specificity, and predictive values of the Asante FASD Screening and Referral Tool (AST) in justice involved youth.

Method: The AST was completed for 100 justice-involved youth ages 12 – 23 ($M = 17.53$, $SD = 1.59$, 81.0% male), 50 with an FASD diagnosis and 50 without PAE, by unblinded raters. Sensitivity and specificity coefficients were calculated according to the

AST referral algorithm (one social factor plus \geq two personal factors, or, no social factors plus \geq three personal factors).

Results: Of the 50 youth diagnosed with FASD, 46 screened positive for further assessment using the AST referral decision tree, while 15 youth without PAE screened positive. Sensitivity and specificity values for the AST were 92% (CI .80 – .97) and 70% (.55 - .82), respectively, producing a positive predictive value of .75 (CI .62 - .85), negative predictive value of .90 (CI .75 - .97), false positive rate of .25 (CI .15 - .38), and false negative rate of .10 (CI .03 – .25).

Conclusions: Overall, findings suggest the AST showed strong clinical utility in identifying youth with a confirmed diagnosis of FASD. Results support the need for further efforts to validate the AST prospectively using full assessments following screening.

Keywords: *Diagnostic screening; FASD; Youth justice*

Source of funding: Canadian Foundation on Fetal Alcohol Research; Social Sciences and Humanities Research Council of Canada, Michael Smith Foundation for Health Research; BC Mental Health and Addictions

Conflict of Interest: The authors declare no conflict of interest

Student/Trainee: No (Postdoctoral Fellow).

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7. Improving outcomes for children with Fetal Alcohol Spectrum Disorder in care

McHenry SA, [Cheng J](#), Popham J, Muhajarine N

University of Saskatchewan

Background/Objectives: Foster parents frequently experience challenges associated with parenting children with FASD that may result in negative outcomes such as instability and multiple placements. In Saskatchewan, there is a need for foster parents to have a better understanding of FASD in order to improve the outcomes of children in care.

Methods: The Saskatchewan FASD Support Network developed and initiated a half-day training on FASD for foster/adoptive parents. A program evaluation using mixed methods was conducted to identify baseline measures and to determine the efficacy of the program. A pre/post test was administered to parents to establish the short-term impact of the program. Phone interviews and focus groups were conducted two months later to illustrate the experiences of parents as they utilized the skills gained during the training.

Results: A total of 67 participants attended training sessions. Only 36% had received any training prior to the program and the majority of parents rated their current knowledge of FASD as fair or poor. The training session improved parent's knowledge in several important areas: general knowledge of FASD; the lived experience of FASD; primary and secondary disabilities; and building supports and strategies. During the focus groups, parents also indicated that they were interested in learning more about age-specific behavioral strategies and ways in communicating about FASD with others.

Conclusion/Discussion: The results from the program evaluation will be used to develop recommendations for best practices and improve outcomes for children with FASD in foster care further developing their training program.

Keywords: *FASD, Program evaluation, Health education*

Source of funding: Mitacs, Saskatchewan FASD Support Network

Acknowledgement: The work of the Saskatchewan FASD Support Network and contributions by Sarah Nordin, Lisa Mooney and Fleur Macqueen Smith are gratefully acknowledged.

Conflict of Interest: The authors declare no conflict of interest

Student/Trainee: Full-time students

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8. Understanding the efficacy of treatment of sleep disorders among children with Fetal Alcohol Spectrum Disorder and Prenatal Alcohol Exposure

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University of Saskatchewan

Background/Objectives: The prevalence of sleep disturbances (SD) among children with FASD is significantly higher than those without. Due to the intricate relationship between the CNS and sleep processes, high rates are not surprising. SDs are strongly linked to cognitive, psychiatric, behavioural, and physical health problems. Parents with children with SDs have been found to have higher stress levels.

Methods: A systematic search of research was performed using popular research databases, and a hand/reference list search. Original reference criteria for inclusion in the review were: publication date (2001+), language (English/French/German), human, study population (FASD), design

(clinical/epidemiological/genetic/pharmaceutical), and outcomes (quality of life/drug effect/psychiatric or behavioural impact/adverse impacts/family functioning). Due to a low number of articles included in the review, criteria relaxed to include: population (FASD/PAE), study (human/animal), and topic (SDs).

Results: The original search produced n=159 articles. Of these, only n=3 met criteria. In the secondary search of human studies n=10 of n=157 possible articles and n=14 out of n=60 animal articles were reviewed. The majority of human articles were descriptive, focusing on prevalence and sleep characteristics. The most rigorous human study found a relationship between sensory problems and increased levels of SDs. Findings from animal studies tended to focus on disruptions to the circadian system.

Conclusion/Discussion: Research established that children with FASD/PAE have a higher likelihood of SDs. Preliminary evidence indicates interventions emphasizing circadian rhythm systems and sensory processing difficulties may be effective. Overall, little empirical research exists and future research should rigorously study outcomes/validate practical strategies that are most significant with individuals with FASD/caregivers/families.

Keywords: FASD/PAE, review, sleep disorders

Source of funding: NeuroDevNet Knowledge Translation Core

Conflict of Interest: The authors declare no conflict of interest

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9. Collaboratively developing capacity for screening for FASD and literacy in educational contexts in Saskatchewan

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Background/Objectives: Among those most vulnerable lacking identification as well as access to services for special learning needs are children with FASD. Overarching research questions initially proposed by the interdisciplinary research team and community partners are: (1) what are effective screening tools for FASD and Literacy for use in educational contexts in Saskatchewan and (2) how to collaboratively develop a methodology using screening tools to determine the prevalence of patterns of reading and literacy skills in students with FASD. Active case ascertainment prevalence data are required in planning

access to diagnosis as well as to interventions in order to ameliorate adverse outcomes for learners with FASD. With further team collaboration, research objectives were refined as follows: (1) to review and evaluate literacy screening tools suitable for learners with diagnoses within FASD; and (2) to develop capacity to pilot and implement a methodology to estimate the prevalence and patterns of dynamic, multi-modal literacy skills in learners with FASD with which to inform learning and life skills interventions.

Methods: An interactive, multi-modal, dynamic literacy assessment protocol and scoring rubric was proposed as an optimal diagnostic screening tool for grades three to six students having existing FASD diagnoses. This qualitative protocol was selected due to its demonstrated capacity to accommodate challenges with memory, sequencing, abstractions, sensory issues, and attention which often characterize these students.

Conclusion/Discussion: Collaborative planning and communication among researchers, community members, Aboriginal Elders, school personnel and parents or caregivers were found to be key to planning, piloting and beginning to implement this project, and to future research collaborations.

Source of funding: Saskatchewan Health Research Foundation (SHRF) Phase I Development Grant

Conflict of Interest: The authors declare no conflict of interest

Student/trainee: Post-Doctoral researcher full time

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