

**SASKATCHEWAN
PSYCHIATRIC
ASSOCIATION**

**DEPARTMENT OF PSYCHIATRY
RESIDENTS AND GRADUATE STUDENTS
RESEARCH SESSION**

April 27, 10:15 – 11:30 a.m.

(In person)

CONFERENCE & ANNUAL GENERAL MEETING

April 26-27, 2024

Questions to research.psychiatry@usask.ca

Department of Psychiatry, CoM, University of Saskatchewan

Adjudicators:

Dr. Malin Clark, MD, FRCPC; Dr. Lloyd Balbuena, PhD; Dr. Nathan Kolla, MD, FRCPC; Dr. Natasha Gattey, MD, PGY5

Poster Session (April 27th, 2024); 10:15 am – 11:30 am*Introduction:*

10:15am – 10:18 am

Dr. Mariam Alaverdashvili, PhD

Time (10:15-11:30)	Poster	Presenter Name	Campus	Adjudicators
10:20 - 10:32	1	Shamis Nabeel	Saskatoon	Drs. Kolla & Gattey
10:35 -10:47	2	David Petrishen	Saskatoon	Drs. Kolla & Balbuena
10:50 - 11:02	3	Amy Short	Saskatoon	Drs. Kolla & Gattey
		Melissa Armstrong	Saskatoon	
10:20 - 10:32	4	Stephen Lee-Cheong	Regina	Drs. Clark & Balbuena
10:35 -10:47	5	Liane Vachon	Regina	Drs. Clark & Gattey
10:50 - 11:02	6	Sureni Gomis	Saskatoon	Drs. Clark & Balbuena
		Kara Quennell	Saskatoon	
11:05 - 11:17	7	Emmanuel Oduntan	Saskatoon	Drs. Kolla & Clark

Presentations will proceed in the order identified and maintain the schedule.

- Each presentation will be comprised of a Presentation (6-7 min) and subsequent Q&A (4-5 min).
- Judges will ask you up to four (4) questions, so up to one minute will be allocated to each question.
- There will be prizes of \$600 (1st prize), \$300 (2nd prize), \$100 (3rd prize) provided by the SPA

Poster Presentation #1

Project Title: The impact of psychostimulants on pre-existing sleep disturbances in newly diagnosed ADHD: A preliminary study.

Authors: S. Nabeel (MD)*¹, D. Petrishen (MD)¹, A. Holt (MD, FRCPC)¹

1. Department of Psychiatry (Saskatoon Campus), University of Saskatchewan

Background

Sleep disturbances are common and distressing to individuals with attention-deficit/hyperactivity disorder (ADHD). We aim to examine the impact of long-term stimulant pharmacotherapy for ADHD on sleep in adults.

Methods

This prospective cohort study captured patients (≥ 18 years; $n = 30$) from the Student Wellness Centre at University of Saskatchewan with reported sleep disturbances (Insomnia Severity Index (ISI) > 7) and newly diagnosed ADHD. The Weiss Symptom Record (WSR), Wender Utah Rating Scale (WURS), Adult ADHD Self-Rating Scale (ARS-V1.1), ISI, and Pittsburgh Sleep Quality Index (PSQI) were used to assess ADHD symptoms, insomnia severity, and sleep quality. Surveys were done at baseline, 4, and 16 weeks following initiation of treatment with stimulant medications, grouped into two methylphenidate equivalent dose ranges (18mg – 24mg or 36mg – 54mg). Mixed methods ANOVA with post-hoc comparison and multiple regression was performed to assess the effect of dose on ISI, PSQI, and ARS-V1.1 across the three timepoints.

Results

A significant improvement in sleep quality (PSQI score) occurred with time ($P < 0.012$) and with higher methylphenidate equivalent doses ($P < 0.001$). Higher stimulant doses showed a positive effect on insomnia severity ISI ($P = 0.047$). Regression analyses indicated a reduction in PSQI and ISI scores ($P = 0.008$ and $P = 0.016$, respectively) from baseline to 4 weeks with higher methylphenidate equivalent doses.

Conclusions

When treating ADHD, the benefits of stimulant medications may outweigh the initial comorbid sleep disturbances as higher methylphenidate doses showed a positive impact on sleep parameters. Further work to characterize these relationships is needed to optimize treatment of ADHD in the clinical setting.

Acknowledgements: Thank you to Royal University Hospital for Community Mental Health Endowment (CMHE) grant (2023). We extend our gratitude to Student Wellness Centre staff for study coordination, and the Department of Psychiatry research team, Cameron Bye and Dr. Mariam Alaverdashvili for their guidance on data analysis and interpretation.

Ethics

Bio 3437

Poster Presentation #2

Project Title: Characterizing chronic non-suicidal self-injury and other forms of repetitive and escalating suicide behaviour as endocannabinoid-mediated pain and reward disorders

Authors: HJJ. Kim (PhD)¹, DA. Petrishen (MD)^{2,*}, RB. Laprairie (PhD)^{1,3}, EM. Peters (MD, FRCPC)²

1. College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, SK S7N 5E5, Canada; 2. Department of Psychiatry (Saskatoon campus), College of Medicine, University of Saskatchewan, Saskatoon, SK S7N 0W8, Canada; 3. Department of Pharmacology, College of Medicine, Dalhousie University, Halifax, NS B3H 4R2, Canada

Background

Suicide, a tragic outcome of psychiatric disorders, encompasses suicidal behaviours (SB) like non-suicidal self-injury (NSSI), suicide ideation (SI), and suicide attempts (SA). Biopsychological theories suggest SB as a coping mechanism for mental distress, with the endocannabinoid system (ECS) implicated in emotional regulation and pain perception. We investigated the hypothesis that stress-induced activation of the ECS initiates NSSI or SB episodes, providing temporary relief from mental anguish. As tolerance to this mechanism develops, SB may escalate to counteract increasing distress.

Methods

This critical review summarized animal and human research to explore repetitive SB as an endocannabinoid-mediated pain and reward disorder. Relevant articles were identified via Ovid MEDLINE and PubMed databases. Search terms included: endocannabinoid system, suicide behavior, non-suicidal self-injury, pain, and addiction.

Results: Literature supports the role of the ECS in mediating repetitive SB, with stress-induced endocannabinoid-mediated analgesia potentially driving escalating SB patterns. This suggests a mechanism underlying the progression from NSSI or SI to fatal SA.

Conclusions

Understanding repetitive SB as an endocannabinoid-mediated disorder offers insights into its etiology and treatment. Targeting the ECS may present a promising approach to prevent the escalation of SB and mitigate its devastating consequences. Further research into endocannabinoid-based therapies is warranted to improve outcomes for individuals struggling with psychiatric distress.

Acknowledgement

We thank our respective departments for providing the authors the time and resources to produce this writing. We received no specific grants from public, commercial, or not-for-profit sectors.

Poster Presentation #3

Project Title: Validating psychotropic prescription algorithm among individuals with FASD: A retrospective view.

Authors: Amy Short (MD) *¹, Melissa Armstrong (MD) *¹, Cameron Bye (MSc)¹, Mansfield Mela (MBBS, FRCPC)¹

1. Department of Psychiatry (Saskatoon Campus), University of Saskatchewan

Background

Pharmacological treatment for FASD is based largely on comorbid behavioral and mood symptoms. A treatment algorithm created in 2020 categorized symptoms into four clusters (hyperarousal, emotional regulation, hyperactive/neurocognitive, and cognitive inflexibility) and provided medication recommendations. This retrospective analysis inspects prescriptions received by FASD patients to assess whether patients were prescribed medications that follow the algorithm's recommendations.

Methods

Data on 3886 patients was gathered between 2016 and 2023 from the Canadian National FASD database. Comorbid psychiatric diagnosis and affected brain domains were categorized within four clusters in the algorithm. The prescriptions given to these patients were compared to the medications recommended in the algorithm.

Results

In patients with FASD with a diagnosis belonging to the hyperarousal cluster, 7.6% of all prescriptions given are medications belonging to the same cluster. An average of 24.9% and 25% of prescriptions belonging to patients with emotional regulation and cognitive inflexibility related comorbidities received medications relevant to those clusters, respectively. 40% of medications given to patients with hyperactive/neurocognitive comorbidity received related medications.

Discussion

We report that prescription practices are not in keeping with the algorithm as it stands. It is likely that clinicians need further training in FASD treatment but the algorithm itself is in need of review.

Acknowledgments

Funding was received from Saskatchewan Health Research Foundation Connections Grant (2022-2023).

Poster Presentation #4

Project Title: The Overrepresentation of Fetal Alcohol Spectrum Disorder among dangerous offenders in Canada

Authors: S. Lee-Cheong (MB, BCh, BAO, PgCPain, MSc)^{*.1}, M. Reboe-Benjamin, MSc, MPhil, M. Park BA, Student-at-law⁴, T. Oleniuk LLB, BSc³, M. Mela MBBS, FWACP, MSc Psych, FRCPC2

1. Department of Psychiatry (Regina Campus), University of Saskatchewan
2. Department of Psychiatry (Saskatoon Campus), University of Saskatchewan
3. College of Medicine, University of Saskatchewan
4. Osgoode Law School, York University

Background

Fetal alcohol spectrum disorder (FASD) describes a spectrum of presentations and disabilities caused by alcohol exposure in utero. Diagnosis is not always possible, due to the complex constellation of information required. Due to cognitive deficits, people with FASD are at increased risk for criminal justice system (CJS) involvement and we hypothesize that FASD is prevalent among dangerous offenders (DO), who show a consistent pattern of violent or sexual offending, considering the overlap in clinical features.

Methods

The Canadian Legal Information Institute website was searched for Judges' and Justices' full text trial judgments where an offender was designated a "dangerous offender" within Alberta and Ontario, with decision date between 2002 and 2022 inclusive. A search function method was used to apply two FASD screening tools to the judgements. The screening tools were designed for different purposes and have different psychometric properties (forensic population vs. general population).

Results

Overall, 40/168 (23.81%) offenders screened positive on the FASD Screening and Referral Form for Youth Probation Officers, while 9/168 (5.36%) offenders screened positive on the Life History Screen. Males accounted for 165/168 (98.21%) of the dangerous offenders and 40/168 (23.81%) had Indigenous ethnicity.

Discussion

As there was missing data for 2706/4368 (61.95%) of items among the two screening tools, our findings conservatively estimate the rate of FASD among DOs (24.40%) to be ~6 times the Canadian general population (4%). Lack of screening is one factor that brings people with FASD to repeatedly interact with the CJS. We propose that FASD screening tools be applied to those identified through the National Flagging System, to help facilitate timely diagnosis and management.

Acknowledgements

2022 Merlis Belsher Family Fund and Menzies Gray Research Fund from the Department of Psychiatry, University of Saskatchewan.

Ethics

Ethics approval was not required as all data used were publicly available through CanLii.org.

Poster Presentation #5

Project Title: Investigating Adherence to a new Transfer of Care Work Standard

Authors: Lianne Vachon (MD)*¹, Shazia Durrani (FRCPC MB-BS) ^{1,2}

1. Department of Psychiatry (Regina Campus), University of Saskatchewan; 2. Wascana Rehabilitation Centre, Saskatchewan Health Authority

Background

The time after discharge from inpatient care is a vulnerable period for patients, with increased risks of medication non-adherence, readmission, and overall mortality. Despite these elevated risks, many psychiatric patients do not receive community care after discharge. Discharge planning practices can improve timeliness of care and follow-up rates, reducing risk during this vulnerable period. The aim of this research was to assess adherence to a recently introduced transfer of care protocol.

Methods

A retrospective chart review was completed for a subset of patients admitted to the inpatient psychiatric unit at Regina General Hospital starting approximately six months after a new transfer of care protocol was implemented. Data was collected from both the inpatient and outpatient settings, measuring percentage adherence to each step of the protocol.

Results

In total, 46 charts were reviewed, including 13 for patients newly placed on CTOs, starting from March of 2021. Six of the ten steps outlined in the transfer of care protocol had >70% adherence, while three of ten had <20% adherence.

Conclusions

While some parts of the transfer to care protocol are being reasonably well followed, including arranging for an outpatient appointment at the time of discharge and timely dictation of the discharge summary, other portions of the protocol have poor adherence, potentially increasing risk to patients during this vulnerable time.

Acknowledgements

We would like to thank Dr. Kirat Shuka who assisted with submitting our ethics application and various outpatient psychiatrists in Regina who collaborated with data collection.

Poster Presentation #6

Project Title: Factors influencing length of stay in the inpatient treatment of eating disorders: A single site retrospective study

Authors: S. Gomis (BSc, MD)*,¹, K. Quennell (MA, MD)*,¹, C. Bye (BSc, MSc)¹, A. Wanson (MD, FRCPC)¹

1. Department of Psychiatry (Saskatoon Campus), University of Saskatchewan

Background

Deprivation-based eating disorders (ED) often require lengthy, intensive, and repeated inpatient admissions. This study reviewed admissions to an inpatient general psychiatry ward in Saskatoon, Canada to examine the associations between length of stay (LOS) and patient and clinical factors.

Methods

Charts were retrieved for all adult patients with a primary or secondary ED diagnosis admitted to the inpatient general psychiatry ward from 2016 to 2023. 179 charts were reviewed with 79 charts included meeting criteria. Predictor variables were organized into 3 stages: patient background (pre-admission), initial presentation (upon admission), and clinical practices (during admission). Bivariate correlations were performed between all predictor variables and LOS and backwards stepwise regression was performed on each stage of predictors and all predictors together.

Results

Analysis of patient background variables revealed that Anorexia Nervosa (AN) and Anorexia Nervosa, Restricting Type (AN-R) are positively correlated with LOS, whereas having a comorbid diagnosis of any type is negatively correlated with LOS ($F(2,76) = 9.69$, $P < 0.001$, R^2 adjusted = 0.18). Mandated treatment with a Community Treatment Order (CTO) via the Mental Health Act and the amount of weight-to-gain are the best predictors of LOS ($F(2,33) = 8.31$, $p = 0.001$, R^2 adjusted = 0.30).

Conclusions

Our results suggest that patients with AN or AN-R as a primary diagnosis can expect a longer LOS relative to those other ED diagnoses. The difference between admission weight and stated goal weight is a significant predictor of LOS; those with more weight to gain can expect to be in treatment the longest. When treatment is mandated via a CTO, a longer LOS can be expected compared to those without.

Acknowledgements

We would like to thank Dr. Mariam Alaverdashvili for her support and direction with the project.

Poster Presentation #7

Project Title: A Systematic Review of Needs Assessment Tools exploring Trauma in Indigenous Communities

Authors: E. Oduntan (B.S.c, MD)*,¹, M. Mela (MBBS, FWACP, MSc Psych, FRCPC)¹

1. Department of Psychiatry (Saskatoon campus), University of Saskatchewan

Background

There is substantial evidence that Indigenous populations have a high incidence of trauma and stressor related disorders. Lack of cultural competency in settler health interventions are often a barrier to understanding the mental health needs of Indigenous communities in developed countries. This systematic literature review aims to examine the efficacy of culturally adapted needs assessments in Indigenous communities located in Canada, U.S, New Zealand and Australia. We hypothesize that culturally adapted needs assessments are more effective than non-culturally adapted needs assessments in understanding trauma related mental health needs in this population.

Methods

The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines were followed. Specific inclusion and exclusion criteria were developed to conduct a database search for relevant papers. Screening the initial 3004 abstracts specific to Indigenous communities resulted in 63 selected articles relevant for the proposed research question. Two reviewers were involved in the screening process. Conflicts were resolved by the primary investigator. One reviewer was assigned per paper for majority of the title and abstract screen. When two reviewers reviewed papers Title and Abstract screening Cohens Kappa score was 0.81-9, indicating high agreement rates. Two raters independently reviewed all papers for full text screening resulting in a Cohens Kappa score of 0.99, near perfect agreement.

Results

Papers in the final review were examined for data extraction. The overall trend is that qualitative studies demonstrate a high completion rate and provides information authors consider useful to understand the trauma related health care needs of Indigenous communities. Of the 8 papers reviewed for data extraction, there were no observable differences between culturally adapted and non-culturally adapted needs assessments in completion rate. Completion rate defined as the percentage of participants who completed the study.

Conclusion

Findings so far support the null-hypothesis that there is no difference in effectiveness between culturally adapted and non-culturally adapted needs assessments. The current findings suggest that qualitative methods are more effective than quantitative methods in providing information readily applicable to trauma related healthcare needs in Indigenous communities.

Acknowledgements

I would like to acknowledge Monique Reboe-Benjamin for their guidance in the development of the research protocol and statistical analysis. I would like to thank Dr. Gloria Yu and undergraduate psychology student Timi Oni for their support in completing the Title/Abstract and Full-text review. Funding was provided by the Department of Psychiatry Laura E. Chapman Trust under Intramural Research Awards Program.