



SEBASTIAN K. LITTMANN DAY

33rd Annual



MARCH 6, 2020
ALBERTA HEALTH SERVICES

33rd Annual Sebastian K. Littmann Research Day

Friday March 6, 2020

Abstract Booklet

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Poster Presentations

1. **“Roles of primary care physicians during the transition to adult care for adolescents and young adults involved with pediatric specialty care: Initial findings from a scoping review.”**

Author(s): [Kyleigh Schraeder, PhD](#), RPsych; [Brooke Allemang, MSW, RSW](#); Cathie Scott, PhD; Kerry McBrien, MD, MPH; Gina Dimitropoulos, PhD; Ashley Felske, BA (Hons); Rachel Zhao, BEng, MLIS; Susan Samuel, MD, MSc.

Abstract

Background: Up to 18% of adolescents have a chronic physical health condition (e.g., asthma, Type I Diabetes) in Canada. Ongoing mental health conditions (e.g., depression, eating disorder) affect about 1-in-6 adolescents internationally. Many of these adolescents will receive specialty care (i.e., tertiary level care or services provided by physicians with additional training and expertise in a defined area) for their chronic condition(s) in childhood or adolescence. For these adolescents, ongoing primary care (e.g., care by a family physician) into adulthood is recommended by best practice guidelines. Yet, the intersection of specialty and primary care for adolescents and young adults (AYA; ages 12-25) has not been studied extensively. To date, it is largely unknown how frequently, how effectively, and in what capacity primary care physicians (PCPs; namely Family Physicians) and specialists collaborate as AYAs leave pediatric-oriented services. Thus, a scoping review was initiated to investigate and synthesize the available literature on the roles of PCPs for AYAs with chronic conditions leaving pediatric care.

Methods: Arksey and O'Malley's (2005) framework for conducting a scoping review was utilized, which involves: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; (5) collating, summarizing and reporting the results; and (6) consulting with relevant stakeholders. Further methodological guidance from Levac et al., (2010) and Peters et al., and the Joanna Briggs Institute (2017, 2018) was followed as well. A search of databases including MEDLINE (OVID), EMBASE, PsychINFO, and CINAHL for published original research articles was conducted with the support of an information specialist and predetermined search strategy. Authors sought articles that were (i) published in English between 2004 and 2019, (ii) focused on AYAs with a chronic condition(s) who have received specialist services during childhood, and (iii) included relevant findings about the roles of PCPs during transition to adult services. After duplicates were removed, 3176 titles and abstracts were screened for eligibility by two co-authors. A total of 218 articles were selected for full-text review and are currently being assessed for their inclusion using a piloted data extraction tool.

Results: Article characteristics regarding population (e.g., age range, sex, diagnosis), context (e.g., country of origin, clinical setting, study aim), and concept (e.g., PCPs roles, knowledge/beliefs, perceived facilitators/barriers and benefits of PCP role/involvement) will be reported during the current full-text review. Included articles will be thematically analyzed (Braun & Clarke, 2006) and preliminary findings from our review will be presented. Themes will be presented to AYA partners and interdisciplinary team members for review to support their validity and inclusivity. Recommendations for future research directions following partner discussion will be addressed.

Implications: Identifying key themes and gaps in the evidence can inform the development and evaluation of transition interventions to optimize primary care for AYAs with chronic conditions who receive specialty and/or community-based care. Further, identifying research and service gaps could legitimize efforts to improve these gaps.

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2. “Genome-Wide Association Study of Obsessive-Compulsive Behaviors including Family-Based and Case-Control Samples”

Author(s): Lilit Antonyan, S-M Shaheen, David Rosenberg, Gregory Hanna, Paul Arnold

Abstract

Background: Obsessive-compulsive disorder (OCD) is a common mental health disorder that involves persistent intrusive thoughts and/or repetitive behaviors [DSM-5, 2013]. OCD may be the extreme of continuously distributed obsessive-compulsive (OC) behaviors (OCB), which are also seen in other conditions such as tic disorders, generalized anxiety disorder and autism spectrum disorder. In this study, we focus on OCB measured using the Child Behavior Checklist OC Subscale (CBCL-OCS) which has been shown to be highly heritable in pediatric twin studies [Hudziak et al., 2004]. Specifically, our aim is to identify genetic variants associated with OC traits assessed with the CBCL-OCS in a large sample of children, and to perform case-control and family-based genome wide association studies (GWAS) for OC traits.

Methods: Genotyping analysis was performed on 1328 subjects, including cases with OCD and other mental health disorders and controls free of mental illness. We used the Illumina Multi-Ethnic Global-8 kit, with genotypes called using the GenCall algorithm (GenomeStudio). Quality control (QC) analysis was carried out using the PLINK software package [Purcell et al., 2007]. Further permutation analysis and identification of statistically significant SNPs will be performed via PLINK using a quantitative regression approach. Polygenic risk score (PRS) analyses will be performed using PRSice software [Euesden et al., 2015] to determine the genetic correlation between risk for quantitative OCB (from our data) and clinical OCD (using data from the Psychiatric Genomics Consortium).

Results: After the GenCall algorithm and QC, 1172 (92.4%) subjects remained for further analyses. Out of 1172 samples 644 are unrelated case (500) and control (144) samples. 294 proband out of 644 samples have available pedigree data within the samples. The Illumina Multi-Ethnic Global-8 kit uses 1,748,250 SNP markers, out of which 98.3% passed QC thresholds. After PLINK analysis statistically significant SNPs will be identified that will provide insight into the genetic etiology of pediatric OC traits. Furthermore, PRS analysis will show the relationship between quantitative traits and clinical OCD.

Conclusion: GWAS is a powerful tool for genetic studies for various traits. We have deep phenotype-genotype data for both family and unrelated case-control subjects. We are confident that our data meets or exceeds QC standards. This is a unique study that will be the largest to date to report genetic markers of susceptibility to OC traits in a pediatric clinic-based population. The results of this study will ultimately contribute to increasing knowledge in this area in terms of improving clinical diagnosis and treatment.

3. “Body Mass Index and Variability in Hippocampal Volume in Youth with Major Depressive Disorder”

Author(s): Sneha Chenji, Emily Cox, Natalia Jaworska, Rose M Swansburg, Frank P MacMaster

Abstract

Background: The hippocampus has been implicated in major depressive disorder (MDD), even in youth. However, possible sources of variability for the hippocampus have been little investigated. One possible source is body mass. The relationship between body mass index (BMI) and the hippocampus has not been explored in youth with depression to date.

Methods: Twenty-two controls (9 male, 13 female, 12 to 24 years of age), twenty-four youth with MDD with normal BMI (12 male, 12 female, 14 to 24 years of age), and twenty youth with MDD and a high BMI (BMI

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Percentile > 90, 14 male, 6 female, 13 to 22 years of age) underwent magnetic resonance imaging (MRI) and magnetic resonance spectroscopy (1H-MRS). Hippocampal volume was investigated along with the following metabolites: N-acetyl-aspartate (NAA), glutamate + glutamine (Glx), choline compounds (Cho), creatine compounds (Cr), and inositol (In).

Results: Right hippocampal volume was smaller ($F = 4.5$, $df = 2,63$, $p = 0.015$) in youth with MDD and normal BMI as compared to both healthy controls ($p = 0.036$, Bonferroni corrected) and youth with MDD and a high BMI ($p = 0.040$, Bonferroni corrected). Right hippocampal volume displayed a trend in association with BMI in the depressed youth overall ($r = 0.30$, $df = 44$, $p = 0.06$) but not with age or depression severity. No difference was observed for the left hippocampal volume and all metabolites between the three groups.

Conclusions: Body mass may account for some of the variability observed in previous studies of hippocampal volume in MDD. Future studies should consider accounting for such variables.

4. “Negative Symptoms and Functioning in Youth at Risk of Psychosis: A Systematic Review and Meta-Analysis”

Author(s): Daniel Devoe, Amy Braun, Thomas Seredynski, Jean Addington

Background: Youth at clinical high risk (CHR) for psychosis often demonstrate significant negative symptoms and poor functioning. However, the magnitude and direction of the relationship between the two remains unknown. Therefore, the objective of this systematic review was to summarize the relationship between negative symptoms and functioning in CHR samples.

Method: Electronic databases Embase, EBM, MEDLINE, CINAHL, and PsycINFO were searched from inception. Studies were selected if they included any study that reported a continuous relationship between negative symptoms and functioning in youth at CHR. The correlation coefficient r was converted to Cohen's d and all random effects meta-analyses were performed using the transformed values.

Results: Twenty-one studies met our inclusion criteria, including a total of 1,668 CHR participants. Negative symptom total scores were significantly associated with poorer global functioning ($d, -1.40$; 95% CI= $-1.82, -0.98$; $I^2=79.4\%$; $P<0.001$, 9 studies, $N=782$), social functioning ($d, -1.10$; 95% CI= $-1.27, -0.93$; $I^2=10.40\%$; $P<0.001$, 12 studies, $N=811$), and role functioning ($d, -0.96$; 95% CI= $-1.17, -0.76$; $I^2=41.1\%$; $P<0.001$, 9 studies, $N=881$). When looking at specific negative symptoms, avolition was significantly associated with poorer social functioning ($d, -0.80$; 95% CI= $-1.45, -0.15$; $I^2=73.4\%$; $P<0.05$, 2 studies, $N=228$) and role functioning ($d, -0.82$; 95% CI= $-1.10, -0.53$; $I^2=0.0\%$; $P<0.001$, 2 studies, $N=228$). Lastly, anhedonia was significantly associated with poorer social functioning ($d, -0.98$; 95% CI= $-1.66, -0.29$; $I^2=85.5\%$; $P<0.05$, 5 studies, $N=366$) and role functioning ($d, -0.82$; 95% CI= $-1.09, -0.56$; $I^2=0\%$; $P<0.001$, 3 studies, $N=264$).

Conclusions: This systematic review and meta-analysis demonstrated that negative symptoms are significantly associated with poor global, social, and role functioning. Moreover, anhedonia and avolition were both significantly associated with poor social and role functioning. This review may help inform the design of future trials wishing to target negative symptoms, functioning, or both.

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5. “The Effects of Intergenerational Trauma on Identity and Stress in Canadian Indigenous Populations.”
Author(s): Jeannette Waegemakers-Schiff PhD, MPhil, MSW, RSW, Andrew Dutcher MD

Abstract

Background

There is wealth of documentation about the atrocities that were committed in Indian Residential Schools (IRS) and through the Sixties Scoop in Canada. We acknowledge the importance of oral traditions and note that through wide spread testimony (Truth and Reconciliation Commission), it is evident that concepts like IRS Syndrome and the ongoing effects of Intergenerational trauma, have had a long deleterious impact on Indigenous people and their communities. How does this affect Indigenous helpers? While many are drawn towards helping others, this aim may be influenced by present and prior traumatic experiences, including the possibility of intergenerational trauma. There is a dearth of quantitative research examining this traumatic impact on the present day mental health of survivors and their families, especially those who work with disenfranchised Indigenous people. Starting to quantify these impacts is an important step towards understanding the depth at which Indigenous people in Canada have been affected.

Methods

We completed a cross-sectional survey on PTSD symptoms, vicarious traumatization and burnout in front-line homeless support services workers in Canada (n = 312, response rate 92%). Data from the workers who identified as being Indigenous, and those who identified as victim or family member of a victim of IRS or the Sixties Scoop was examined for levels of traumatic stress and burnout. Using measures such as the PCL-6 to measure trauma and the PROQoL for vicarious traumatization and burnout, we compared rates with those who had not had such adversities. Other variables measured included contact with elders, involvement with traditional activities, identification with Indigenous heritage and participation in culture and community, and looked at the extent to which they mitigated traumatic stress for Indigenous staff.

Results

Our results have shown that there are strong correlations between either being a victim of IRS or the Sixties Scoop or having a family member that was, and high rates of traumatic stress and burnout with a Pearson correlation (PC) = 0.466 (95% CI 0.194-0.716), but these did not significantly differ from the non-Indigenous workers. For those who had family member or were personally in the IRS there was a strong correlation with feeling disconnected from Indigenous community and heritage, PC = -0.533 (95% CI -0.774 - -0.179), and not engaging in traditional activities, PC = -0.471 (95% CI -0.694 - -0.169). The results of our study also showed that there was significant underreporting of Indigenous status among this population when compared with the rates of those who had a close family member that was in a residential school or the Sixties Scoop. Only 10% had initially identified as being Indigenous, however 27% identified they had a close family member that had been through IRS or the Sixties Scoop. This 2.7 fold increase between those reporting Indigenous identity and those with familial residential school experience, raises the issue of under-identification of urban Indigenous people in research demographics. This finding was consistent with respondents reports of not feeling good about their Indigenous identity, PC = -0.676 (95% CI -0.827 - -0.513). These results also highlight the proportionally high number of Indigenous people working in helping professions, 27% accounted for in this study, and the importance of having Indigenous elders as part of a multidisciplinary team in jobs where burn-out and vicarious trauma occur at high rates as 42% of workers in these facilities spoke with an elder.

Conclusions

This research is an important first step in identifying what intergenerational trauma looks like for Canadian Indigenous people and quantifying the impact of Intergenerational trauma, residential schools and the Sixties Scoop. The data suggests that those who have experienced the effects of intergenerational trauma experience higher rates of disconnection from their Indigenous identity and community, as well as not being involved in

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cultural activities. The Canadian government's colonial policies of the IRS aimed at assimilation of Canada's Indigenous people and destruction of culture continue to have their effects on Indigenous people to this day. More studies need to be done on the impact that these institutions and policies had, and are continuing to have on Indigenous people in Canada.

6. "ACEs in a Forensic Sexual Offending Population"

Author(s): Kate Hamilton, PhD RPsych & Kristen Dooley, MSW

Abstract

Adverse Childhood Experiences (ACEs) are well known risk factors for poor behavioural, physical, and mental health outcomes (Felitti & Anda, 1998). Recently, there is an emerging literature examining the link between ACEs and sexual offending behaviour. Research has shown that male sexual offenders are more likely than community males to have experienced early trauma (Levenson, 2014; Levenson et al., 2016; Marshall et al., 2014; Jespersen et al., 2009).

The neurodevelopmental pathways associated with early abuse are complex, and the underlying mechanisms are not well understood. Affect dysregulation, insecure attachment, and cognitive impairments have been linked to high risk behaviours and maladaptive coping, which then culminate in greater risk for physical illness, disability, mental health problems, addictions, and premature mortality. Emotion dysregulation has been identified as a mediating variable in the relationship between childhood trauma and adult interpersonal functioning (Poole et al, 2018). Treatments targeting emotion regulation and interpersonal skill development hold particular relevance for those who have experienced significant childhood adversity.

The present study explored the prevalence of ACEs in a sample of males provincially incarcerated for sexual offences. The relationship between ACEs and estimated sexual recidivism risk and offence type was also examined. Finally, the study examined the relationship between ACEs and self-report measures of mood and emotion regulation, interpersonal functioning, self-compassion, and sexual compulsivity.

Enhancing our understanding and awareness of the prevalence and correlates of childhood adversity will assist in the development of trauma-informed sexual offending programs.

7. "Expanding HEADSTRONG Anti-Stigma program for families"

Author(s): Emma Cullen, Fiona Haynes, Dr. Gina Dimitropoulos

Abstract

Background & Rationale: Stigma can play a large role in the treatment, or lack thereof, of mental illnesses. Many studies have confirmed that stigma not only affects the youth, but also their family (Moses, 2009). In many families where an adolescent suffers from mental health disorders, stigma has been shown to be a potential barrier for the youth to receive mental health treatment because of the influence of stigma on the parents themselves (Heflinger & Hinshaw, 2010). The parental view of mental health affects how youth feel about their own mental health, and therefore engaging families in mental health treatment, and discussions about mental health and stigma, are crucial. Anti-stigma programs like HEADSTRONG have been proven to be effective in shifting youths' perspectives about mental health and mental illness. However, there are no similar programs for parents and caregivers. Dr. Dimitropoulos has partnered with the Mental Health Commission of Canada to undertake a study to examine how we can create an anti-stigma program for parents. **Methods:** We are conducting qualitative interviews and focus groups with parents/caregivers, youth (aged 16-24) and key stakeholders (mental health professionals, social workers, educators, etc). These interviews will help us understand what families and youth think mental health is; how families discuss mental health; what

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barriers exist that prevent families from having conversations about mental health; what supports, strategies, and tools would be helpful in creating an environment in which families feel comfortable discussing mental health. We are currently undertaking interviews, and hope to interview approximately 120 individuals. We will then analyze the interviews per Braun and Clarke, use thematic coding to create a framework through which we can analyze and understand the interviews.

Preliminary themes

While the interviews are ongoing, there are some consistent themes that are emerging from the interviews. The lack of education (and easily accessible education) about mental health and mental illness was noted by most of the participants, especially by parents. The need to differentiate between mental health and mental illness was also mentioned in multiple interviews. Most prominently, it was brought up that learning from the lived experience of others can provide solace to families and help parents to feel less alone. From analyzing these interviews, we will use the themes to create the framework for a new anti-stigma program aimed at working with parents & caregivers.

Citations

Heflinger, C.A., Hinshaw, S.P. (2010) Stigma in Child and Adolescent Mental Health Services Research: Understanding Professional and Institutional Stigmatization of Youth with Mental Health Problems and their Families. *Adm Policy Ment Health* 37, 61–70

Moses, T. (2010). Adolescent mental health consumers' self-stigma: associations with parents' and adolescents' illness perceptions and parental stigma. *J. Community Psychol.*, 38, 781-798.

8. “The increase of distressed emerging adults in counselling from 2014-2019 despite a declining 20-24 year old Calgary population.”

Author(s): Angela Laughton, Amy M. Bender, Robbie Babins-Wagner

Background: Civic census data from 2014-2019 indicate a decline in the number of 20-24 year olds living in Calgary. Here we investigate the proportion of 20-24 year olds seeking counselling at Calgary Counselling Centre (CCC) over the same time period and compare their initial levels of distress and counselling outcomes to a control group of CCC clients 25 years and older.

Methods: Mental health outcomes were assessed using the Outcome Questionnaire (OQ 45.2) before every counselling session to measure the client’s initial level of distress and the change in scores to the last counselling session. Comparisons of distress were made within the emerging adult group and between the emerging adult clients and the older clients.

Results: There were 5,587 clients aged 20 to 24 and 30,951 clients aged 25 and over with counselling outcomes from 2014 to 2019. The proportion of emerging adult clients who attended counselling at CCC increased from 13.1% in 2014 to 15.9% in 2019. This increase was not due to an increase in the number of emerging adults in Calgary, which decreased 6.8% to 5.9% in the same time period. The initial level of distress for emerging adults became more severe from 2014 to 2019, $F(5, 5478) = 6.98, p < 0.001$. Emerging adults were also significantly more distressed at their first session compared to the older adults ($t(33843) = 24.1, p < 0.001$). By last session 50.5% of emerging adults had improved or recovered on the OQ 45.2 compared to 45.2% of those over age 25, $X^2(3, N = 15951) = 40.08, p < 0.001$. Both age cohorts bested the counselling standard benchmark by over 29%.

Conclusions: The number of emerging adults attending counselling increased from 2014 despite declining numbers of this age group in Calgary. The levels of distress in emerging adults have increased since 2014 and are higher than older adults. Despite higher levels of distress, counselling is an effective tool to help with mental health issues. More research is needed to understand the increased demand of emerging adults seeking counselling.

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References: City of Calgary Civic Census by Community, Age and Gender. Contains information licensed under the Open Government License – City of Calgary.

9. “Mental health programs for Indigenous clients: An analysis of cultural integration”

Author(s): Queenie Kwan Wing Li, Adam Murry, PhD

Abstract

Background

A colonial history of ethnocentric and assimilationist programs has resulted in suspicion towards conventional psychological treatment by many Indigenous clients. In accordance with the Canadian Code of Ethics for Psychologists, all persons are entitled to benefit equally from psychological contributions. Practitioners are also bound by the principle of responsible caring and must thoughtfully discern potential harms and benefits of interventions for their clients. A lack of cultural competency is a threat to this ethical commitment because it increases the likelihood of miscommunication, misinterpretation, and misdiagnosis. Mental health programs have responded by attempting a move towards community-based, culturally responsive methods. The goal of this study was to engage in an interdisciplinary exploration of how and to what extent mental health programs for Indigenous populations are implementing culture.

Methods

A quantitative content analysis was performed to investigate the state of knowledge of cultural integration in Indigenous mental health. A thorough literature review was completed using various research databases for breadth of disciplines. Articles were scanned for inclusion criteria and the relevant works were coded deductively and inductively. Coding resulted in counts of cultural components and descriptive statistics were used to report the extent of integration as represented in the peer-reviewed, empirical literature.

Results

Seven components of cultural integration emerged across the evaluated mental health programs. Programs represented three levels of integration (low, moderate, high), with the majority in the moderate range. The most common components were easily observable surface elements (e.g., representation, protocol), whereas foundational deep components (e.g., language, pedagogy) were less common. Surface culture was more common across all programs and levels of integration.

Conclusions

The emergent distinction between surface and deep cultural responsiveness suggests that all integration is not equal. While surface culture elements may be more accessible to implement, deep culture addresses values and thought patterns and should be more thoroughly considered. Future research should explore program outcomes in relation to the level and type of cultural integration in order to develop a strong evidence base for informing cultural mental health programs.

10. “Psychiatric Pharmacogenetics Research Program for Children & Adolescents at the University of Calgary”

Author(s): Laina McAusland, Abdullah Al Maruf, Paul D. Arnold, and Chad A. Bousman

Abstract

Background: Antidepressants and other psychiatric medications are often used to assist in the treatment of mental health problems in children and adolescents. However, the efficacy and tolerability of these medications can vary from child to child. This variability is, in part, a result of interindividual difference in genes that

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interact with medications. Although numerous gene-drug interactions have been identified in children and young adults, the evidence for many of these interactions is preliminary or requires evaluation in real-world settings before widespread clinical adoption. Thus, we have designed two independent studies: Pharmacogenetics of Antidepressant-Induced Disinhibition (PGx-AID) and Pharmacogenetic Supported Prescribing in Kids (PGx-SParK) as part of a psychiatric pharmacogenetics research program that aims to: (1) Strengthen the understanding of how genes contribute to adverse effects of antidepressants in children and adolescents and (2) Evaluate the implementation of pharmacogenetic testing in real-world child and adolescent mental health settings.

Methods: Both studies will recruit participants aged 6-17. PGx-AID is a case-control study that will specifically target individuals with a diagnosis of depression, anxiety, or obsessive-compulsive disorder, whom have taken a selective serotonin reuptake inhibitor and have (n=60) or have not (n=60) experienced tolerability issues. PGx-SParK is a six-month, prospective, open label, single arm trial that will target individuals initiating or changing a psychiatric medication. To reflect real-world application, clinicians will identify individuals for which they believe pharmacogenetic testing would be beneficial. Participants will be tested and results provided to clinicians to assist with prescribing decisions. Process (turnaround times), outcome (e.g., adverse drug events, healthcare utilization), and economic (i.e., cost-effectiveness) indicators will be assessed.

Results: To date, 13 participants have been enrolled in the PGx-AID study and recruitment for the PGx-SParK study will commence this summer. Details related to recruitment rates at participating sites, inclusion/exclusion criteria and study procedures will be presented.

Conclusion: The PGx-AID and PGx-SParK studies are innovative initiatives to uncover clinically-useful genomic markers for antidepressant adverse events and to evaluate the real-world implementation of pharmacogenetic testing in child and adolescent mental health care. The results from these studies will facilitate the implementation of Canada's first evidence-based testing service in child mental health and ultimately contribute to ongoing efforts aimed at improving mental health outcomes in Alberta.

11. "Evaluation of Repetitive Transcranial Magnetic Stimulation at the Carewest Operational Stress Injury Clinic"

Author(s): Kaitlin Chivers-Wilson, MD, MSc, FRCPC; Jason Novick, MA; Evelyne Felber Charbonneau, MA; Clint Hirst, MD, MSc, FRCPC

Background: Posttraumatic Stress Disorder (PTSD) and Major Depressive Disorder (MDD) are major causes of morbidity amongst active duty and retired Canadian Forces and RCMP personnel. Despite the use of best evidence-based therapies, some patients with these Operational Stress Injuries (OSIs) do not achieve desired response or remission. PTSD and MDD are associated with dysfunctions of neural circuits linking the prefrontal cortex (PFC) and the limbic system. Repetitive Transcranial Magnetic Stimulation (rTMS) of the right and left dorsolateral PFC have been shown to benefit these patients, and this additional treatment presents an opportunity for faster, more complete improvement of OSI symptoms in our military and RCMP population.

Objective: This is a preliminary study, assessing the efficacy of rTMS treatment targeting symptoms of mental health OSIs in active duty and retired Canadian Forces and RCMP personnel. Outcome measures examined symptoms of depression and posttraumatic stress. The primary objective of this outcome evaluation was to examine improvements in symptoms during the course of rTMS treatment.

Methods: The patient population comprised 21 current and former military and RCMP members who undertook rTMS for MDD and PTSD at the Carewest OSI Clinic. Patients were screened with diagnostic interviews by at least two different FRCPC certified Psychiatrists and diagnosed with treatment resistant PTSD with comorbid treatment resistant MDD or treatment resistant MDD alone. Patients had failed to adequately respond to at least two different antidepressant medications and at least one evidence based psychotherapy.

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Patients were treated with left sided 10HZ rTMS at 80-120% RMT over the DLPFC. Patients were offered 20 sessions with an additional 10 sessions if desired. Patients were offered right sided 1 Hz treatment over DLPC if they failed to respond to 20 sessions of left sided 10 Hz treatment. Patients concurrently undertook biological and psychological treatment as usual at our clinic. Symptoms were tracked using the Patient Health Questionnaire 9-Item (PHQ-9) Scale and the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5), which were administered at the 1st, 10th, 20th, and 30th rTMS sessions. Descriptive statistics were produced for the PHQ-9 and PCL-5 total scores for comparison between the 1st and 30th rTMS sessions.

Results: Scores reflected a general trend towards improvement, and patients with comorbid MDD appeared to experience significant benefit with rTMS treatment. Specifically, there was a decrease in the PCL-5 total score from well above the clinical cut-off for PTSD ($M = 47.00$, $SD = 7.35$) to below the clinical cut-off ($M = 30.00$, $SD = 12.55$). In addition, there was a decrease in the PHQ-9 total score from moderately severe depression ($M = 18.00$, $SD = 4.33$) to moderate depressive symptoms ($M = 10.00$, $SD = 6.05$).

Conclusions: This preliminary research represents the first occasion that rTMS has been employed at an OSI clinic within Canada. Early results suggest left sided, high frequency rTMS over DLPFC is effective in improving symptoms of treatment resistant PTSD and MDD. Ongoing evaluation of rTMS is needed to assess the therapeutic benefits for patients.

12. “Psychological Characteristics and Childhood Adversity of Adolescents with Atypical Anorexia Nervosa Versus Anorexia Nervosa”

Author(s): [Ashley Pauls](#), Gisele Marcoux-Louie, Manya Singh, Scott B. Patten, Gina Dimitropoulos

ABSTRACT

BACKGROUND

The assessment and diagnosis of atypical anorexia nervosa (AAN) is an ongoing challenge for clinicians. This study aims to examine psychological morbidity and exposure to childhood adversity in adolescents with AAN compared to adolescents with anorexia nervosa, restrictive sub-type (AN-R).

METHODS

This retrospective chart review compared 42 adolescents with AAN to 79 adolescents with AN-R on a variety of psychosocial measures at the time of presentation to a specialized eating disorder program.

RESULTS

In contrast to AN-R, adolescents with AAN had more severe drive for thinness ($p = .011$), body dissatisfaction ($p = .038$), quality of life ($p = .047$), and global functioning ($p = .032$). ACE score severities were associated with diagnostic subtype ($p = .009$). Adolescents who had high ACE scores (ACE score ≥ 4) had over 5 times higher odds of having AAN than those who did not have high ACE scores. There was no significant difference between groups on measures of low self-esteem and non-accidental self-injury.

CONCLUSION

Adolescents with AAN presented with similar or more severe psychosocial distress compared to their peers with AN-R across a variety of measures. The findings highlight the need to address trauma, body-related difficulties, quality of life, and functioning in the assessment and treatment of adolescents with AAN.

13. “The ADAPT/FAST Programs: Developing neurostimulation as an intervention for pediatric neuropsychiatric disorders”

Author(s): [Kayla D. Stone](#), Rose M. Swansburg, Frank P. MacMaster

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Background: Response and remission in pediatric neuropsychiatric disorders is not universal and novel approaches are needed. Building on our pioneering work using non-invasive brain stimulation (NiBS) in children and adolescents and our experience developing the clinical application of NiBS in adults, we are launching two interrelated programs. The first is to study the real-world implementation of NiBS to treat depression in adolescents. The second is to discover, in an innovative approach, novel interventions for other neuropsychiatric disorders. The programs are called (1) the ADAPT service- Adolescent Depression And Other Psychiatric disorders TMS Clinic, and the (2) FAST program- Finding Alternatives to Standard Treatment.

Methods: For ADAPT, since the target site for depression is already well-established, we will use repetitive TMS as an intervention to treat youth (ages 13 – 18) with treatment resistant major depressive disorder (MDD). Treatment will be over four weeks (5 days a week). Assessments will occur at baseline, week 6, 6 months, and 12 months. Children and youth between ages of 13 to 18 years with treatment resistant depression as defined by at least one failed trial of an antidepressant or cognitive behavioral therapy. To monitor symptoms, participants will undergo standardized assessments (i.e., MINI-KID, Connors, Hamilton Depression Rating Scale Score, and MASC). We will use the Consolidated Framework For Implementation Research (CFIR) approach to evaluate the implementation of the ADAPT program. For FAST, we have identified neurological target sites for different disorders (e.g. obsessive-compulsive disorder, attention deficit hyperactivity disorder, anxiety disorders) and will take a “fast/fail” approach to test if repetitive TMS and/or behavioral therapy improves symptoms. Fast/fail operates under the assumption that methodology is adjusted in the early stages of a pilot project depending on response (e.g. reduction or no change in symptoms). If symptoms improve, the intervention moves to a phase III clinical trial; if symptoms do not improve, a new target site is tested. In both programs, scores on standardized assessments measuring symptomatology will be the primary outcome measure. We will use neuroimaging to assess the structure, function, and neurochemistry of the targeted brain areas as secondary outcome measures.

Results: The first projects will be underway in summer 2020. For both programs, we hypothesize that TMS treatment will significantly improve symptoms associated with the specific neuropsychiatric disorder tested.

Conclusions: These programs will be pivotal in understanding the developing brain and generating new knowledge about pediatric neuropsychiatric disorders. Importantly, they provide the perfect opportunity to apply our existing knowledge for translation to more precise, tailored treatment approaches in the field.

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Oral Presentations

Session 1A - Chair: Scott Patten

1. “The International Consortium for Health Outcomes Measurement Psychotic Disorders Standard Set”

Author(s): Donald Addington, Emily McKenzie and the ICHOM Psychosis working group

Abstract

The aim of this project was to develop an essential set of patient-reported outcomes for adolescents and adults who met DSM-5 criteria for a schizophrenia spectrum or bipolar I disorder.

Methods: First, systematic literature reviews were conducted to identify patient outcomes in clinical trials, patient registries, and from the quantitative and qualitative literature. An international working group of researchers, clinicians and service users then recommended outcomes for inclusion using an on-line modified Delphi consensus technique in a series of video-conference calls. All outcome measures identified in the literature reviews were assessed for evidence supporting psychometric properties, feasibility of implementation, and licensing fees. An additional search, using the Terwee search filter, was conducted to inform the process. The outcome set was sent to a broader international stakeholder group for feedback.

Results: The research team identified 227 measures used in clinical trials and patient registries and 84 baseline risk adjustment factors. The outcome measures were reduced to 9 using the predetermined selection criteria. Risk adjustment variables were reduced by identifying those commonly used in multiple studies. The working group identified 4 outcome domains covering 13 outcomes. They then narrowed the number of outcome measures to 8 to 10 measures which were combined into an outcome set that can be administered in about 30 minutes.

Conclusions: We have identified an internationally usable set of patient-reported outcomes for people with psychosis that has the potential to improve clinical decision making, enhance health care for the benefit of patients, and facilitate scientific knowledge.

2. “Family accommodation and its effects on mental health care – a research idea”

Author(s): Dan Dulberger, Calgary Family Therapy Center

Abstract

This presentation will propose to research the effects of family accommodation and its systemic treatment on mental health care efficacy.

Family accommodation, describes thoughts and behaviors intended to help a mentally ill relative avoid or alleviate distress related to the disorder. These behaviors typically involve active participation in symptoms of the disorder, or facilitating avoidance related to the disorder. Accommodative behaviors include, for example: Engaging in excessive handwashing to help reduce obsessional stress in obsessive-compulsive disorder; reassuring a patient with checking compulsions that they have checked the locks “correctly”; never leaving a child with separation anxiety disorder in the care of other adults; or adhering to rigid meal-times or meal-

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preparation rituals in anorexia nervosa. Family accommodation can accompany any psychiatric condition, including ASD, hoarding, somatoform, post-traumatic stress and psychotic disorders.

Family accommodation is currently known to have several effects: First, even though intended to alleviate symptoms, it further augments them. The desire to reduce the patient's distress fuels a cycle of negative reinforcement that leads to further increasing levels of accommodation and more severe symptoms. Second, family accommodation may lead to a complete failure to emerge into adulthood, fostering a pattern of chronic, dysfunctional, entitled dependence between the mentally ill family member and their family. Third, family accommodation often critically impairs the parents' wellbeing.

A fourth, hitherto unresearched effect of family accommodation, but frequently noted in our clinical work, is that of an "invisible footprint" on the mental health system's ability to alleviate mental health problems. In cases where families continue to accommodate to mental health problems, most types of mental health care seem less effective and more transient, resulting in outcomes as diverse as recurring admissions, psychiatric staff stress, chronic outpatient care with no visible effect, ineffective treatment of elder abuse cases, ineffective treatment of digital and other forms of addiction, multiple suicide threats, unexplained medical symptoms, social withdrawal, persistent psychological and physical health problems in primary caregivers, and almost any psychiatric disorder. Moreover, being a dysfunctionally palliative form of caregiving, family accommodation often reinforces treatment refusal, placing innumerable cases under the radar of the health system.

Over the past ten years a group of psychologists and social workers developed an intervention that helps families de-accommodate to a mentally ill relative, break their devastating cycles of invisibility and despair even without the IP's cooperation. Systemic change is achieved by working with the parents and their social support networks on unilaterally de-accommodating to the adult child's dysfunctional dependence and entitlement, thereby helping reduce symptom severity, increasing autonomous functioning and empowering caregivers.

To the best of our knowledge, no research yet exists into the impact of family accommodation on mental health care efficacy. We propose to research the following two general hypotheses:

1. That in cases where family accommodation is present, the efficacy of mental health is dampened, relative to controls where families are not accommodating to mental health illness.
2. That the intervention we have developed is effective in helping families decrease their accommodating behaviors, in ways which are conducive to more effective treatment.

The design, measurement, tools, populations procedure and funding needs for this research will be presented and discussed.

3. "On becoming trauma-informed, trauma-competent and trauma-focused in clinical practice (2016-2020): State of the art implications for assessment, diagnosis, treatment, and system design."

Author(s): David Cawthorpe

Abstract

Introduction

A recent body of work reveals the relationship between biomedical, physical disorders and psychiatric disorder and adverse childhood experiences (ACEs) leading to the development of a permanent World Psychiatry Association morbidity section (WPA Bangkok 2020).

Methods

This presentation reviews the results of three peer-reviewed papers, which bring into focus the evidence base underpinning the need for the rapid adaptation of psychiatric practice and training in respect to psychiatric

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diagnosis and the prescription of treatment in respect to the advancement required to become a trauma-focused system of care.

Results

For example, while there is a palpable relationship between clinical severity on presentation and ACE survey scores, there is virtually no relationship between ACE scores and psychiatric diagnosis, a finding that calls for a fundamental paradigm shift in pedagogy and practice.

Conclusion

The last paper published (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6839744/>) proposes a system-level paradigm shift integrating several parallel evidence-based initiatives in service of rationing limited resources to service-seeking families of children and adolescents who need it most. It operates to increase the capacity for developing the therapeutic space identified by staff as required to address the salient treatment concerns of children presenting with substantial adverse childhood experiences and mental problems.

4. “Implementation of the CPS-AHS (Calgary Police Service-Alberta Health Services) Mental Health Consultation Line”

Author(s): Michael McComb, Cheryl Gardner, Tobi Martin, Kevin Zeh, Tavia Nazarko, Claire Benade, Brian Marriott

Background: In 2018, collaborative work was initiated between Alberta Health Services (AHS) and the Calgary Police Service (CPS) to address common challenges related to conveying individuals on a Form 10 to Calgary Zone Emergency Departments (EDs). Two specific goals were formulated:

- Goal 1: Reduce the number of 4.3 Form 10's/1000 people conveyed to hospital to 3.7 Form 10's/1000 people by November 30, 2019.
- Goal 2: Reduce the wait-time of CPS in EDs from a 90th percentile of 102 minutes, to a 90th percentile of 90 minutes by November 30, 2019.

A series of targeted initiatives were strategically rolled out using a Plan-Do-Study-Act (PDSA) approach to implementation. One of the main initiatives was the formation of a mental health Consult Line for CPS Officers. This presentation will focus on the implementation and impact of the Consult Line.

Methods: The evaluation of the Consult Line consisted of four distinct activities:

- Collecting feedback from CPS officers: Data collection occurred between October 2019 and December 2019 via electronic survey. Content analysis was used to extract major themes (n=63).
- Collecting feedback from AHS staff: AHS staff were surveyed to assess their experience providing consultation to CPS Officers. The electronic survey was distributed to 24 staff in November 2019; 13 staff responded (54%). Content analysis was used to extract major themes.
- Assessing the overall implementation and uptake of the Consult Line: An evaluation spreadsheet was developed for tracking specific data elements related to use of the Consult Line. AHS staff did direct entry into the spreadsheet. Data analysis (e.g. frequencies) was done within Excel.
- Assessing the impact of the Consult Line on the overall project goals: Administrative data from CPS and AHS was used to look at changes in the number of Form 10s and CPS wait-times in EDs.

Results: The most prominent theme from CPS Officers was that the Consult Line provided information from expert professionals which helped provide direction and guidance on specific client cases. The median usefulness rating provided by Officers was 4 (mode=5, mean=3.9); options ranged from 1 “useless” to 5 “Very Helpful”. 100% of AHS respondents report that the Consult Line has been a positive change and has positively impacted CPS and AHS’ working relationship. 92% report that the Consult Line has had a positive impact on

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client care. Data also indicates increased use of the Consult Line over time across CPS Districts, a decreasing rate of Form 10 occurrences (rate/1,000 has been reduced to 3.7 or 468 fewer occurrences pre vs. post Consult Line), and CPS wait-times in EDs have been reduced to a 90th percentile of 90 minutes.

Conclusions: Data suggests that the Consult Line has been successfully implemented. Further, although a series of targeted initiatives were concurrently rolled out, there is data to support that the Consult Line has been instrumental in impacting the overall project goals of reducing the number of Form 10s to Calgary Zone EDs and reducing the wait-time for CPS when conveying individuals on a Form 10 to EDs. The Consult Line therefore has positively contributed to making CPS and AHS operations more effective and efficient.

Session 1B - Chair: Gina Dimitropoulos

1. **“A Pilot Study Examining the Feasibility and Acceptability of the Ecological Momentary Assessment (EMA) for Adolescents with Anorexia Nervosa (AN) and their Parents/Caregivers”**

Author(s): Manya Singh, David Lindenbach, Tom Lange, Gisele Marcoux-Louie, Dr. Gina Dimitropoulos

Abstract

Background: Family Based Treatment (FBT) is the current gold-standard treatment for adolescents with Anorexia Nervosa (AN), emphasizing parental involvement in addressing disordered eating by empowering parents to re-nourish their child (Lock & Le Grange, 2015). Current research shows that the best predictor of remission at the end of treatment is rapid weight gain of 2.3kg by the 4th week of FBT (Doyle et al., 2010; Le Grange et al., 2014); however, the mechanisms facilitating early weight gain in FBT have received minimal empirical attention, and existing studies rely on retrospective recall of family interactions during meals. Ecological Momentary Assessment (EMA) is a tool which allows participants to report on family interactions in real-time and within their natural home environment. The current study aimed to test the feasibility and acceptability of using EMA for adolescents with AN and their parents/caregivers during the first 4 weeks of FBT.

Methods: Five families (adolescents and parents/caregivers) received a text/e-mail prompt to their mobile device daily for the first 4 weeks of FBT at various time points, including one hour after waking, one hour after dinner, and at the end of day. Upon receiving the prompt, participants completed assessments detailing family interactions during meals. A brief qualitative interview was conducted weekly to obtain data about the technological and procedural challenges of employing the EMA. Compliance and attrition rates were tracked for the first 4 weeks of FBT, and qualitative interviews were analyzed to identify patterns across the interviews using thematic analysis (Braun & Clark, 2013).

Results: Adolescents completed 86% of the one hour after waking and 79% of the end of day assessments. Parents/caregivers completed 77% of the one hour after waking, 70% of the one hour after dinner, and 66% of the end of day assessments. There was no change in likelihood to complete assessments over the first 4 weeks of FBT. The qualitative interviews revealed three overarching themes, highlighting the barriers and facilitators to completing the EMA, and recommendations for change. While participants found the EMA to be easy to use, they noted challenges with regards to integrating the EMA into their daily schedules, especially during schedule interruptions.

Conclusions: Overall, the EMA is tolerable and acceptable to use for adolescents with AN and their families, and is an innovative e-mental health tool which can be used to track family interactions during meals in real-time. This pilot study is a subset of a larger study examining the facilitators of early weight gain in the first 4 weeks of FBT using EMA, which will be incorporated into clinical practice in a tertiary eating disorder program in the near future.

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2. **“Capacity of Alberta healthcare providers to recognize and respond to sexual abuse and internet exploitation of their patients”**

Author(s): David Lindenbach, Rosemary Perry, Olivia Cullen, Asmita Bhattarai, Ruth Diaz, Scott Patten, Gina Dimitropoulos

Abstract

Background: Health and mental health providers are one of the major sources of referrals to child welfare authorities, but there is minimal research examining the capacity of these professionals to detect and respond to online child sexual exploitation.

Method: The present cross-sectional study surveyed 209 staff in the Alberta public health system to understand their ability to recognize and respond to concerns about grooming, luring, sexual abuse or the sharing of sexual images off and online of their clients.

Results: Findings from this study revealed that more than one-third of respondents dealt with all four concerns (grooming, luring, sexual abuse and sexual image distribution) in their clients and families in the last 12 months. The participants reported receiving more training in sexual abuse as compared to grooming, luring or sexual image distribution. Most respondents reported no formal training regarding the role of the internet in enabling sexual exploitation of youth.

Conclusions: A number of recommendations for clinical training are highlighted, the most pressing of which pertains to how technology is being employed to exploit children and adolescents.

3. **“The critical role of primary care during the transition from adolescent to adult services for those with chronic conditions: Perspectives of Canadian primary health care professionals”**

Authors: Kyleigh Schraeder, PhD, RPsych; Gina Dimitropoulos, PhD; Brooke Allemang, MSW, RSW; Kerry McBrien, MD, MPH; Susan Samuel, MD, MSc.

Abstract

Background: Family physicians, and other members of the primary health care (PHC) team, may be ideally positioned to provide transition care to adolescents and young adults (AYAs; ages 12-25) exiting pediatric services. Ideally, transition planning is developed in collaboration with AYAs, caregivers and clinicians, including specialists and primary health care (PHC) professionals (Kaufman, 2007). Despite unique opportunities for family physicians to be involved in transition planning, given their long-standing relationships with AYAs and knowledge of families, the involvement of PHC professionals has not been adequately studied. To date, few pediatric transition interventions, which aim to facilitate transition preparation and navigation support for AYAs and families, have included a primary care component (Bhawra, 2018). Solutions for involving PHC professionals during the transition planning process need to be further explored.

Objective: To identify solutions for involving PHC professionals with transition care for AYAs with chronic conditions.

Methods: PHC professionals were recruited from 6 Primary Care Networks in Calgary, Alberta. A total of 18 semi-structured individual interviews were completed, and transcribed verbatim. Data were analyzed using a qualitative description approach involving thematic analysis (Braun & Clarke, 2006). Our analysis was enhanced by triangulation techniques, such as comparing interpretations between members of our research team across disciplines (primary care, pediatrics, social work, psychology).

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Results: Participants offered range of solutions to facilitate transition planning for AYAs with chronic conditions within the primary care setting. Our analysis of solutions resulted in three themes: (1) raising awareness about existing primary care resources; (2) educating AYAs, families, and clinicians about the critical role of primary care (“explaining the why”); (3) adapting practices or developing new tools in primary care (e.g., creating a “very solid discharge plan” or “transition summary”).

Conclusions: The integration of primary care and specialty pediatric care is recommended for all AYAs transitioning from pediatric to adult services. Yet, little is understood about how this is operationalized in practice. Our method, of gaining perspectives from PHC professionals, identified feasible solutions in the primary care setting that need to be further explored, and tested. We plan to corroborate this data with additional perspectives from providers, AYAs and families, to develop a primary care-based trial to improve transition care.

4. “The Relationship Between Adverse Childhood Experiences and Success in Eating Disorder Treatment”

Author(s): Abigail Trebilcock, David Lindenbach, Manya Singh, Gisele Marcoux, Gina Dimitropoulos

Abstract

Background: Adverse childhood experiences (ACEs), particularly physical and sexual abuse, have been associated with increased risk of developing eating-related pathology. Emotional neglect, emotional abuse, and exposure to intimate partner violence are common ACEs, yet the relationship between these experiences and eating disorder pathology are poorly understood (Kimber et al., 2017). Specifically, the relationship between ACEs and a participant’s likelihood to complete treatment for eating-related pathology is unclear. The objective of the current study was to identify the relationship between specific ACEs and successful completion of the Calgary Eating Disorder Program.

Methods: A 10-item ACE questionnaire including items addressing verbal abuse, physical abuse, sexual abuse, physical neglect, emotional neglect, exposure to intimate partner violence, and substance abuse, among others, is administered upon entry into the Calgary Eating Disorder Program. Data from 218 closed cases at the Calgary Eating Disorder program were pulled. Patients ranged in age from 8-24. Information regarding diagnosis, age at treatment, total ACE scores, individual ACE questionnaire responses, and reason for leaving the program were included in the pulled data. The relationship between ACE questionnaire responses and success in the eating disorder program was analyzed using a logistic regression model.

Results: A higher total ACE questionnaire score was associated with decreased likelihood to complete treatment within the program. In particular, experiences of emotional neglect and exposure to intimate partner violence independently predicted a reduced likelihood to complete treatment.

Conclusion: Childhood experience of emotional neglect as well as exposure to intimate partner violence may be predictive of a reduced likelihood to complete treatment at the Calgary Eating Disorder Program. This finding highlights the necessity of understanding how childhood experiences and family cohesion impact the success of patients undergoing eating disorder treatment.

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Session 2 – Chair: Scott Patten

1. "Delirium Prediction Models Based on Admission Acuity"

Presenting Author: Stephana J. Cherak, MSc, University of Calgary, Canada

Co-Authors: 1 Andrea Soo, PhD, University of Calgary, Canada; 2 Brianna Rosgen, BHSc, University of Calgary, Canada; 3 E. Wesley Ely, MD MPH FCCM, Tennessee Valley Veteran's Affairs Geriatric Research Education Clinical Center, Nashville, United States; 4 Henry T. Stelfox, MD PhD, University of Calgary, Canada; 5 Kirsten M. Fiest, PhD, University of Calgary, Canada

Objective: Differences in delirium incidence among intensive care units (ICUs) might be attributable to case-mix. The delirium standardized incidence ratio (SIR) adjusts for patient age but adjusting for this risk factor alone might not provide enough standardization to control for case-mix. Given that the presentation of delirium in low severity patients is often more uncertain than in high severity patients, patients with a low severity of illness represent an important target to prevent incident ICU delirium. Here we compared a modeled delirium incidence (MDI) based on prediction models specific to ICU admission type with the delirium SIR as a novel method to assess case-mix adjusted variation in delirium outcomes.

Methods: Retrospective cohort study of 14 medical-surgical ICUs in Alberta, Canada evaluated consecutive delirium-free adults. Inclusion criteria were surviving hospital with ICU length of stay greater than or equal to 24 hours and with a documented admission type (e.g., elective post-surgery, emergency post-surgery, non-surgical). Delirium was assessed using the Intensive Care Delirium Screening Checklist. Prediction models based on ICU admission type were previously developed and internally validated. An SIR and MDI were calculated for each ICU. Delirium SIR was calculated by multiplying the number of patients per age group within individual ICUs by the age group specific delirium incidence rates from ICUs (i.e., an age-standardized incidence, which is the observed frequency). A delirium SIR below 100 classified an ICU's delirium incidence as lower than expected based on Alberta age-specific incidence rates whereas an SIR above 100 classified an ICU as higher than expected delirium incidence. The MDIs (i.e., the expected frequencies) were calculated for admission type (MDIAT) using prediction models. Approximation of MDIAT to SIR was evaluated through correlation analysis.

Results: From 8,878 included patients, delirium incidence was 49.9% (95% confidence interval 43.8-48.6). Average delirium SIR was 90.5 (range: 47.3 to 123.8), with 9 ICUs SIR below 100 (i.e., lower than expected) and 5 ICUs SIR above 100 (i.e., higher than expected). MDIAT for all ICUs was higher than SIR; mean increase was 24.8 (95% CI 20.2 to 29.5). Average MDIAT was 115.3 (range: 53.3 to 157.7), with 5 ICUs MDIAT below 100 and 9 ICUs MDIAT above 100. Overall the MDIAT correlated significantly with delirium SIR ($r^2=0.985$).

Conclusions: Modeled delirium incidence from prediction models specific to ICU admission type provide excellent approximation of delirium SIR. Delirium prediction models customized to the ICU patient at admission may help clinicians elucidate clinical risk profiles for objective comparisons of case-mix adjusted variation in delirium outcomes. Used for ICU benchmarking, delirium prediction models provide actionable information to improve outcomes.

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2. “Title: Is Caregiver-Detected Delirium Associated with Symptoms of Depression and Anxiety in Caregivers of the Critically Ill?”

Author(s): Brianna K. Rosgen BHSc, Karla D. Krewulak PhD, Henry T. Stelfox MD, PhD, E. Wesley Ely MD, MPH, Judy E. Davidson DNP, RN, and Kirsten M. Fiest, PhD

Abstract

Background: Many caregivers of critically ill patients are troubled when witnessing delirium in their loved ones. This study aimed to evaluate associations between caregivers witnessing patient delirium and their own symptoms of depression and anxiety.

Methods: Consecutive adult patients and caregivers (i.e., family or friends) were enrolled in a prospective cohort study in a medical-surgical intensive care unit. Patient delirium was evaluated once daily by study nurses using reference standard DSM-5 criteria. Caregivers also evaluated patient delirium once daily using the Sour Seven and Family Confusion Assessment Method (FAM-CAM) questionnaires. Caregivers completed the Patient Health Questionnaire 9 (PHQ-9) and General Anxiety Disorder 7 (GAD-7) questionnaires to assess their own symptoms of depression and anxiety, once daily for a maximum of five days. Descriptive statistics, odds ratios, and regressions were calculated.

Results: Patient-caregiver dyads (n=142) were enrolled from November 2017 to March 2019. Seventy-four percent of caregivers were female, with a mean age of 54.8±16.3 years. Twenty-five percent (95%CI 18-32%) (n=36) and 35% (95%CI 27-42%) (n=50) of caregivers demonstrated clinically significant symptoms of depression and anxiety, respectively. Caregivers who detected delirium using the Sour Seven had significantly higher odds of experiencing clinically significant depression symptoms (OR 2.90, 95%CI 1.21-6.93), but not anxiety (OR 1.56, 95%CI 0.77-3.16) symptoms. With each increased point on the Sour Seven, PHQ-9 and GAD-7 scores increased 0.23 and 0.27 points, respectively. Delirium detected by the nurse reference standard and FAM-CAM was not associated with depression or anxiety.

Conclusions: Delirium detected by caregivers was associated with increased depression and anxiety, whereas delirium detected by nurses was not. Caregivers may be more distressed by delirium symptoms they witness themselves, compared to symptoms detected by healthcare professionals. While caregivers may be useful partners in delirium detection, future studies must evaluate the impact of involving family caregivers in delirium detection on the development of depression and anxiety symptoms in caregivers.

3. “Youth engagement in research: Benefits, challenges & strategies”

Author(s): Brooke Allemang, MSW, RSW; Gina Dimitropoulos, PhD, RSW; Olivia Cullen, MSW, RSW

Abstract

Youth are the experts on their own lives and should be consulted in research and program development which will directly impact them. Having youth involved in research results in many benefits including more relevant research questions, increased capacity within communities, empowerment of participants, and better retention rates. However, there are different schools of thought, methods and reasons for engaging individuals in participatory research processes. Participatory action research (PAR), for example, engages with participants and communities as co-researchers to find solutions to issues of concern as decided by the community. PAR challenges traditional notions of knowledge and traditional ideas that research is objective and apolitical. PAR seeks change at both individual and structural levels to improve the lives of individuals and communities. A PAR methodology seeks to involve co-researchers at all stages of the research project and challenges traditional notions of the researcher as expert. In comparison, patient-oriented research (POR), which has emerged more

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recently within the context of the health and mental health systems, engages patients as partners, focuses on patient-identified priorities and aims to improve patient outcomes. PAR advocates for the involvement of individuals with lived experience and their family members at various stages of research from study conceptualization to knowledge translation. This presentation will delve into the nuances of PAR and POR approaches, and the benefits and challenges of applying these methods to research involving youth. The continuum of patient engagement will be described, with examples of how to youth engage in the research process depending on a researcher's goals and resources. Finally, concrete strategies for meaningfully engaging youth in research across disciplines and areas of study will be identified and discussed.

Session 3 - Chair: Scott Patten

1. "Perinatal DBT Skills Group: Findings from a Pilot Project in Primary Care"

Author(s): Erin Girard MD; Anna MacKinnon PhD; Erin Cassidy; Heather Scott MD, FRCPC; Kristin Romanoski, MC, R. Psych

Abstract

Problem addressed: There is a need for accessible and timely evidence-based interventions that treat a broad range of mental health problems, such as mood and anxiety disorders during the perinatal period.

Objective of program: The adapted Perinatal Dialectical Behaviour Therapy (DBT) skills group aims to reduce psychological distress and improve coping skills among pregnant and postpartum women. Additionally, it aimed to address concerns around wait-times and access to mental health treatment for women during this time-sensitive period.

Program description: The Perinatal DBT program included weekly group sessions over 12 weeks, taught by mental health professionals, focused on the core DBT skills of mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation.

Conclusion: The Perinatal DBT program resulted in improvements in overall mental health and perceived parenting self-efficacy. Future improvements including ongoing evaluation and innovation in extending the program to the community.

2. "Social Work Students' Perception and Experiences Working with Young Adults with Eating Disorders"

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Abstract

Background: Based on the literature, eating disorders can have a large influence over realities and perceptions and can mask the thought of any sort of future where an eating disorder does not exist (Godley, Tchanturia, MacLeod & Schmidt, 2001). Understanding future thinking can help us understand people's experiences, perceptions, and give us clues into what gets in the way of them thinking about their future.

The overarching objective of this study is to understand where there is a need for more eating disorder education, training, and awareness for healthcare professionals, specifically in supporting young adults with eating disorders in planning for their future. We sought to answer the following research questions: 1) What do social work students believe they need to increase their knowledge and skills in responding to young adults with eating disorders when discussing their future with and without their illness? 2) How can the understanding

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of future thinking in young adults with eating disorders change the way that health professionals support clients in planning for a life with or without the disorder?

Methods: For this study, I recruited graduate and undergraduate students by email from the Faculty of Social Work at the University of Calgary and conducted three 1-hour focus groups. During the focus groups, we asked questions about their perceptions on the training needed to support young adults with eating disorders in planning for their future. The data was then transcribed and analyzed using thematic analysis.

Results: This method of analysis helped us to discover three major themes within the data. The first is eating disorder training for social workers. The second is future oriented thinking for young adults with eating disorders. The third is the unique social work approach in working with young adults with eating disorders. Participants discussed social work as distinctive to other disciplines such as medicine or psychology. Participants also mentioned that they do not feel confident in being able to recognize or treat eating disorders in young adults. Therefore, it is important to have the tools necessary to fill this role and assist in aligning with the holistic nature of the profession.

Conclusions: The results from this qualitative study can influence future research and the treatment of eating disorders by offering insight to clinicians who are supporting young adults with eating disorders.
