

RAPID FIRE PRESENTATIONS

1. A pilot study of a nurse-delivered cognitive-behavioral therapy intervention (Ziphamandla) for adherence and depression in HIV in South Africa

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Background: Rates of depression in people living with HIV (PLWH) in low- and middle-income countries are high, and depression is associated with antiretroviral therapy (ART) non-adherence. Yet few psychotherapeutic interventions to address depression in PLWH are available in such contexts. There is also a shortage of mental health professionals to deliver such interventions, making task-sharing models a point of interest. This study evaluated a nurse-delivered, cognitive behavioral therapy intervention for adherence and depression (CBT-AD) in ART-users with major depressive disorder (MDD) in South Africa. Primary aims were to assess whether the intervention was (a) feasible and acceptable to patients, and (b) successful in improving ART adherence, depressive symptoms, and functioning. **Methods:** Fourteen ART-users with MDD received six to eight sessions of CBT-AD. Assessments were conducted weekly during treatment for the primary outcomes measures (ART adherence and depressive symptoms), and at baseline, post-treatment, and at 3-month follow up for the secondary clinical measures. Generalized mixed level modeling was used to examine change in clinical outcomes over time. **Results:** Acceptability of the intervention was evidenced by strong participant retention. Provider fidelity to intervention delivery was low and highlights key feasibility issues pertaining to supervision. There were significant reductions in clinician-rated and self-reported depressive symptoms, and modest improvements in adherence following the Life-Steps module of the CBT-AD intervention. **Conclusion:** These preliminary data demonstrate the potential usefulness of a nurse-delivered CBT-AD intervention for PLWH in SA. Next steps include a randomized clinical trial with a larger sample to establish effectiveness of the intervention in this population.

2. Integrating mental health care into primary care systems in low- and middle-income countries: lessons from PRIME and AFFIRM

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Mental, Neurological and Substance use disorders present a high burden of disease in Low and Middle Income countries (LMICs), but there is a large ‘treatment gap’ between demand for, and provision of, services to address the need. A number of research innovations have subsequently emerged, to test and demonstrate effectiveness of integrating mental health care into primary care systems, through ‘task sharing’. This paper presents experiences and lessons of two such innovations to narrow the treatment gap in LMICs. These are: the PRogramme for Improving Mental health carE (PRIME) and the Africa Focus on Intervention Research for Mental health (AFFIRM). Although results of the impact of these initiatives are not yet available, the lessons presented are based on our experiences of the process of delivery and collaboration with a range of stakeholders involved. Key lessons in implementing task sharing of mental health care in primary care are as follows: Engage actively and collaboratively with local stakeholders; Use primary care systems to access vulnerable populations; Use cultural concepts of distress and narrative-based vignettes to identify persons with potential mental health problems; Set up systems of ongoing supervision and support for lay health workers; Adequately compensate lay health workers for their services; Respond to mental health needs in humanitarian crises by ‘building back better’; and Make use of ‘policy windows’ in government. In conclusion, if vulnerable populations are to be reached at primary care level, careful attention to the detail in addressing the ‘how’ questions of implementation and scale-up are essential.

3. Methamphetamine use and extrapyramidal symptoms in people with major affective and non-affective psychosis

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Background: Extrapyramidal symptoms (EPS) are frequent in patients treated with antipsychotics and comorbid substance use disorders (SUDs). We aimed to determine whether EPS occur more often in patients with psychotic disorders and co-occurring methamphetamine (MA) use disorders, and we examined the relationship between MA use, antipsychotic type, dose and EPS. **Methods:** Psychiatric and SUD diagnosis was determined using the SCID-I for DSM-IV. EPS was determined using the Simpson-Angus Scale (SAS) for Parkinsonism, the Barnes Akathisia Rating scale (BARS), and the Abnormal Involuntary Movement Scale (AIMS) for tardive dyskinesia. We analysed data using multivariable logistic regression analysis. **Results:** The sample included 102 patients; 65.7% were male, 54.9% had schizophrenia spectrum disorders, 20.5% bipolar type I disorder, 11.7% schizoaffective disorder and 12.7% substance induced psychosis. EPS occurred in 38.2% of patients and was significantly associated with MA use in the unadjusted and adjusted analysis (OR_{adj} = 4.01, 95% CI= 1.07-14.94, p=0.039). Patients with MA dependence and MA use > 3 years, were significantly more likely to have EPS. We found a significant interaction effect between MA use disorders and standardised antipsychotic dose on the occurrence of EPS (OR_{adj} = 1.01, 95% CI= 1.00-1.01, p=0.042). There were no significant associations with EPS with comorbid alcohol, cannabis, or methamphetamine use disorders. **Conclusions:** Patients with a MA use disorder were significantly more likely to have EPS with evidence for a dose-response effect. Clinicians should carefully titrate antipsychotic dosage from lower to higher doses to avoid EPS in patients with MA use disorders.

4. Intellectual disability in South Africa: A systematic review of 25 years of early intervention (1990-2015)

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Background: People with Intellectual Disability (PWID) can spend years in unsuitable treatment, living, and learning environments. Early misdiagnoses result in exclusion from early intervention programs that develop adaptive skills. Most research evidence on needs planning emanates from settings where PWID receive supports from committed governments; and where Foetal Alcohol Spectrum Disorder and vertically transmitted HIV/AIDS are less engulfing. Despite high prevalence, ID research from the Global South is comparatively rare. To lobby for improved outcomes for PWID, we must investigate and augment the evidence-based literature on ID in South Africa. **Method:** We analyse peer reviewed ID publications (1990-2015) on early identification and intervention (n=12) in South Africa. Studies were identified by entering MeSH terms into five electronic databases (n=145). None of the studies were co-authored by PWID. We followed PRISMA reporting methodology, and registered the original protocol with PROSPERO. **Results:** South Africa lacks capacity for systematic and sensitive early identification of ID. An unaccommodating and unintegrated health system obstructs specialist referrals. The needs of PWID carry low priority and little political will, and an unresponsive policy environment is juxtaposed against ID being the commonest childhood disability in rural African children aged 2-9 years. **Conclusion:** Without effective early identification protocols we cannot calculate their cost benefit, nor motivate for investment in systematic ID screening initiatives. Identifying children as young as 2 years old might mitigate the high prevalence of secondary disabilities among young South Africans with ID. Prioritising early detection and developing evidence based intervention programs can enable improved outcomes for PWID.

5. “Parenting from the Inside Out (PIO): A mentalization-based parenting therapy” : A pilot study of PIO with mothers accessing services at Lentegeur Psychiatric Hospital

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Introduction: The purpose of this pilot clinical trial was to evaluate the preliminary feasibility, acceptability and efficacy of an adapted evidence-based parenting intervention for use with parents accessing mental health services at different treatment settings in Cape Town, South Africa. The one arm of the Lentegeur Hospital (LGH) subgroup are working with mothers accessing in - and outpatient services for their child/ren with developmental disability (cwdd), while the other worked with mothers referred to the outpatient clinic. This will provide a template for future use by mental health professionals in community and hospital settings. **Method:** For mothers with cwdd, the study was piloted as a 12 session individual intervention, with a small sample of mothers. For mothers accessing outpatient services, an 8 session group intervention was conducted. Pre and post assessments were conducted to assess the parent’s mentalisation capacity using selected questions from the parent developmental interview (PDI). A video of the mother-child dyad involved in play was recorded and will be coded pre and post the intervention using the Coding Interactive Behavior (CIB) protocol. **Results:** All the mothers who participated in the study showed an improvement in their PDI post assessment scores. Pre PDI mean was 2.73 and post PDI 3.47. Effect size is 0.50. **Conclusion:** The intervention required a number of adaptations to suit our population as well as our available resources. Some of the challenges for conducting clinical research are highlighted, as well as the benefits of collaboration across sites.

6. Feasibility of a smartphone application to identify young children at risk for Autism Spectrum Disorder in a low-income, community setting in South Africa

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Background: The Autism&Beyond iPhone application elicits and quantifies social referencing and positive emotional behaviours to determine risk for ASD in children aged 12-72 months. Our aim was to determine the technical feasibility of the app in a naturalistic, low-income South African community setting. **Methods:** Parents of 45 typically-developing African children from Khayelitsha Township, Cape Town, South Africa were recruited to participate in the study. Children were shown 4 age-appropriate 30 second videos (Bubbles, Bunny, Mirror and Rhymes) on a study smartphone, which recorded the child’s facial expressions and head movement. Automated computer vision algorithms coded the behaviours. First we validated the automatic computer coding by comparing computer-generated analysis of facial expression and head movement to human coding in a randomised non-caucasian sample (N=10). Next we compared observed behaviours (positive emotion and time attending) between South African participants (N= 37) and an age- and sex-matched USA sample (N=37). **Results:** Human coding showed excellent overall agreement with automated coding for positive emotion. There was no statistically significant difference in positive emotion response or looking time to video stimuli between the local and matched USA sample, except for the mirror video, where South African children spent more time looking at the image (p = 0.003). **Conclusion:** Results from this pilot feasibility study suggest that the automated coding was reliably able to code similar positive emotions in non-caucasian South African children, and that the video stimuli elicited, overall, very similar emotional responses. Findings suggested that it may be feasible to pursue larger-scale evaluation of the App in a local setting.

7. Triple comorbidity of severe mental illness, HIV infection & alcohol abuse in a female population at a community psychiatric clinic in Cape Town: Prevalence and correlates

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Introduction: Severe mental illness (SMI), Human immunodeficiency virus (HIV) infection and hazardous alcohol use are global epidemics. The presence of two or more of these conditions in one individual may result in worse health outcomes. The main aim was to investigate the prevalence of a triple co-morbidity of SMI, HIV infection and hazardous alcohol use in a female population at a community psychiatric clinic in Cape Town South Africa; and the impact of this triple comorbidity on medication adherence. Furthermore, we set out to identify demographic and clinical variables that are predictors of poor adherence to both psychotropic medication and ART where applicable. **Methods:** We conducted a cross-sectional study of female patients presenting to Gugulethu psychiatric clinic over a ten-month period. Demographics and clinical variables were explored using a variety of questionnaires. **Results:** We interviewed 127 patients, of whom 55 were HIV positive (43.3%). The overall prevalence of a triple comorbidity in this population was 7.9%. Only 20% within this triple comorbidity group were adherent to their psychotropic medication. Out of the 10 participants with a triple comorbidity, only five were on ART. Of these 5 participants, only two were adherent. **Conclusion:** The presence of a triple diagnosis was not found to be a predictor of poorer medication adherence, compared to having one or two diagnoses. Nevertheless, there was evidence that concurrent hazardous drinking in SMI patients predicted poor compliance to both psychotropic and ART treatment regimens (for those living with HIV).

8. Barriers to accessing healthcare among refugees: A review of literature

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Introduction: Refugees often encounter isolation from social groups, and are among the most ostracised individuals in the countries in which they seek refuge. These factors often create barriers for refugees when accessing healthcare. The barriers put strain on the overall health and well-being of refugees, and have detrimental implications in later life. The World Health Organisation proposed in the Global Strategy (2016-2030) that in order to ensure health and well-being, universal health coverage is need, which includes that of refugees too. The current review aimed to establish the barriers that refugees encounter when accessing healthcare. **Methodology:** A search was conducted during the month of July 2016 using Science Direct and Ebscohost (Academic Search Complete, Africa-Wide, ERIC, CINAHL, Health Source: Nursing, PsycArticles, PsycInfo, PubMed, MedLine, and SocIndex) for the periods 2005 until 2015. Two of the reviewers evaluated the methodological quality of the studies independently. Fifteen studies met the criteria for inclusion in the review. Seven of the studies were conducted in the USA, six in Australia and two in Canada. **Results:** The review highlighted the following as key barriers when accessing healthcare: language and communication, health insurance and cost, distrust of an unfamiliar and complex healthcare system, a lack of information on healthcare, cultural factors, barriers unique to the refugee situation as well as practical barriers. **Discussion:** The barriers established in the review could serve as a guide for healthcare professionals to ensure equitable access and delivery of healthcare among refugees, by minimised the identified barriers.

9. Maternal posttraumatic stress disorder and infant developmental outcomes in a South African birth cohort study

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Background: There is a growing body of work documenting the detrimental effects of trauma exposure and posttraumatic stress disorder (PTSD) during pregnancy. However, there is a relative paucity of research emerging from low- and middle-income (LMIC) settings such as South Africa; and few studies to date have explored specifically the association between maternal trauma exposure or PTSD and infant neurodevelopmental outcomes. In this study, we aimed to investigate the association between maternal PTSD and infant development in a South African birth cohort. **Methodology:** Data from the Drakenstein Child Health Study – a population-based birth cohort study investigating maternal and child health longitudinally in a poor, peri-urban sub-district in the Western Cape – were analysed. Maternal sociodemographic characteristics, psychosocial risk profile, and trauma exposure/PTSD were assessed using self-report and clinician-administered interviews. Infant anthropometry (at birth and age 6 months) was measured; and neurodevelopment at 6 months was assessed using the Bayley III Scales of Infant Development. Linear regression analyses explored associations between key predictor and outcome variables. **Results:** Data from 111 mothers and 112 infants (1 set of twins) were included. Most mothers (72%) reported lifetime trauma exposure; the lifetime prevalence of PTSD was 20%. Maternal PTSD was significantly associated with poorer fine motor and adaptive behaviour – motor development; the latter remaining significant when adjusted for study site, alcohol dependence, and infant head-circumference-for-age z-score at birth. **Discussion:** Maternal PTSD may be associated with impaired infant neurodevelopment. Further work in LMIC populations may improve early childhood development in this context.