

When compared with rates in similar State Hospitals in the 1970s tardive dyskinesia was now half the rate and Parkinsonism about the same.

**Conclusion.** Overall rates of movement disorder are not very different between FGA and SGA. The surprise was that intention tremor only occurred with SGAs. Why?

### The effect of ketamine on psychopathology and implications for understanding schizophrenia and its therapeutic use: a meta-analysis

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**Aims.** To conduct a meta-analysis of the effect of ketamine on psychopathology in healthy volunteers and patients with schizophrenia, and the experimental factors affecting this.

**Background.** Ketamine is increasingly used to treat depression and other psychiatric disorders but can induce schizophrenia-like symptoms. Despite this, the consistency and magnitude of symptoms induced by ketamine, or what factors influence the effects of ketamine on these remain unknown.

**Method.** MEDLINE, EMBASE and PsychINFO databases were searched for within-subject placebo controlled studies reporting symptoms using the Brief Psychiatric Rating Scale (BPRS) or Positive and Negative Syndrome Scale (PANSS) in response to an acute ketamine challenge in healthy participants or people with schizophrenia. Two independent investigators extracted study-level data for a random-effects meta-analysis. Total, positive and negative BPRS and PANSS scores were extracted. Sub-group analyses were conducted examining the effect of: blinding status, ketamine preparation, infusion method and time between ketamine and placebo condition. Standardized mean change scores were used as effect sizes for individual studies. Standardized mean changes between ketamine and placebo for total, positive and negative BPRS and PANSS were calculated.

**Result.** Of 7819 citations retrieved, 36 studies involving healthy participants were included. The overall sample included 725 healthy volunteers exposed to both the ketamine and placebo condition. Ketamine induced a significant increase in transient psychopathology in healthy participants, for total (Standardized mean change (SMC) = 1.50 (95% CI = 1.23 to 1.77),  $p < 0.0001$ ), positive (SMC = 1.55 (95% CI = 1.29 to 1.81),  $p < 0.0001$ ) and negative (SMC = 1.16, (95% CI = 0.96 to 1.35),  $p < 0.0001$ ) symptom ratings, relative to the placebo condition. This effect was significantly greater for positive symptoms than negative symptoms ( $p = 0.004$ ). Bolus followed by constant infusion increased ketamine's effect on positive symptoms relative to infusion alone ( $p = 0.006$ ). Single-day study design increased ketamine's effect on total symptoms ( $p = 0.007$ ), but age and gender did not moderate effects. There were insufficient studies for meta-analysis of studies in schizophrenia. Of these studies, two found a significant increase in symptoms with ketamine administration in total and positive symptoms. Only one study found an increase in negative symptom severity with ketamine.

**Conclusion.** These findings show that acute ketamine administration induces schizophrenia-like symptomatology with large effect sizes but there is a greater increase in positive than negative

symptoms, and when a bolus is used. These findings suggest bolus doses should be avoided in its therapeutic use to minimize the risk of inducing transient positive psychotic symptoms.

### Evaluation of self-esteem in adolescents of secondary school level

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**Aims.** To assess the frequency of low self-esteem among adolescents of secondary school level in private schools of Karachi

**Method.** It was a cross-sectional descriptive study done in ten private schools of Karachi for a period of 6 months. The proposal of the study was accepted by ethical committee of Jinnah Postgraduate Medical Centre, Karachi (called Institutional Review Board or IRB). The subjects fulfilling inclusion criteria were enrolled after obtaining informed consent by their parents. A semi-structured Performa was used to assess students' particulars and included Rosenberg Self-esteem Questionnaire as a part of Performa. The data were analysed using SPSS version 17.0. Frequencies & percentages were generated for the level of self-esteem. Stratified analysis was done with a  $p$  value  $< 0.05$  taken as significant.

**Result.** Out of the 246 students, 39.8% were of 14yrs of age, 36.2% were 15 years of age, while only 24% of adolescents were 16 years of age. Majority (64.2%) of the students were males while females were 35.8%. 70.3% of the students had normal level of self-esteem, whereas 28.9% of students had low self-esteem and only 0.8% of students had high self-esteem. Relationship of all the variables was found to be non-significant except that of educational level ( $p$ -value 0.047).

**Conclusion.** Self-esteem was found to be normal in most of the adolescents of secondary school level but still more than 1/4th of the study participants had low self-esteem which if assessed and addressed early may save the individuals from mental health issues as well as problems at work and home life. Having a better understanding of self-esteem, can help us to identify the adolescents who have low self-esteem and are predisposed to develop mental health difficulties in future. It can lead to not only early intervention and reducing the burden of disease but also help in developing programs to help improve self-esteem in adolescents, hence increasing their overall motivation and productivity.

### Mental health, physical impairment and violence among FSWS in North Karnataka, South India: a story of intersecting vulnerabilities

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**Aims.** This study examines the prevalence and associations between recent violence experience, mental health and physical health impairment among Female Sex Workers (FSWs) in north Karnataka, India.

**Background.** Multi-morbidity, in particular the overlap between physical and mental health problems, is an important global health challenge to address. FSWs experience high levels of gender-based violence, which increases the risk of poor mental health, however there is limited information on the prevalence of physical health impairments and how this interacts with mental health and violence. **Method.** We conducted secondary analysis of cross-sectional quantitative survey data collected in 2016 as part of a cluster-RCT with FSWs called Samvedana Plus. Bivariate and multivariate analyses were used to examine associations between physical impairment, recent (past 6 months) physical or sexual violence from any perpetrator, and mental health problems measured by PHQ-2 (depression), GAD-2 (anxiety), any common mental health problem (depression or anxiety), self-harm ever and suicidal ideation ever.

**Result.** 511 FSWs participated. One fifth had symptoms of depression (21.5%) or anxiety (22.1%), one third (34.1%) reported symptoms of either, 4.5% had ever self-harmed and 5.5% reported suicidal ideation ever. Over half (58.1%) reported recent violence. A quarter (27.6%) reported one or more chronic physical impairments. Mental health problems such as depression were higher among those who reported recent violence (29%) compared to those who reported no recent violence (11%). There was a step-wise increase in the proportion of women with mental health problems as the number of physical impairments increased (e.g. depression 18.1% no impairment; 30.2% one impairment; 31.4%  $\geq$  two impairments). In adjusted analyses, mental health problems were significantly more likely among women who reported recent violence (e.g. depression and violence AOR 2.42 (1.24–4.72) with rates highest among women reporting recent violence and one or more physical impairments (AOR 5.23 (2.49–10.97)).

**Conclusion.** Our study suggests multi-morbidity of mental and physical health problems is a concern amongst FSWs and is associated with recent violence experience. Programmes working with FSWs need to be mindful of these intersecting vulnerabilities, inclusive of women with physical health impairments and include treatment for mental health problems as part of core-programming.

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### Prevalence and correlates of common mental health problems and recent suicidal behaviour among female sex workers in Nairobi, Kenya: findings from the Maisha Fiti study

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**Aims.** Adverse childhood experiences (ACEs), poverty, violence and harmful alcohol/substance are associated with poor mental health outcomes in the general population. These risks are likely to be exacerbated among Female Sex Workers (FSWs), however there are few studies examining risks factors for mental health problems among FSWs. We examine the prevalence and correlates of common mental health problems including suicidal behaviour among FSWs in Kenya.

**Method.** Maisha Fiti is a longitudinal study among FSWs randomly selected from Sex Worker Outreach Programme (SWOP) clinics across Nairobi. Baseline data were collected from June-December 2019. Mental health problems were assessed using the Patient Health Questionnaire (PHQ-9) for depression, the Generalised Anxiety Disorder tool (GAD-7) for anxiety, and the Harvard Trauma Questionnaire (HTQ-17) for Post-Traumatic Stress Disorder (PTSD). Recent suicidal behaviour was defined as reported suicide attempt or suicidal ideation in the past 30 days. Other measurement tools included the WHO Adverse Childhood Experiences (ACE) score, WHO Violence Against Women questionnaire, and the WHO ASSIST tool (to measure harmful alcohol/substance use in the past 3 months). Descriptive statistics and multivariable logistic regression were conducted in Stata 16.1.

**Result.** Of 1039 eligible FSWs, 1003 FSWs took part in the study (response rate: 96%) with a mean age of 33.7 years. The prevalence of moderate/severe depression was 23.2% (95%CI: 20.7–25.9%), moderate/severe anxiety 11.0% (95%CI: 9.3–13.1%), PTSD 14.0% (95% CI: 12.2–16.5%) and recent suicidal behaviour 10.2% (95%CI: 8.5–12.2%) (2.6% suicide attempt; 10.0% suicidal ideation). Among women with any mental health problem 63.0% also had a harmful alcohol/substance use problem. One in four women (25%; 95%CI: 22.5–27.8%) had depression and/or anxiety and this was independently associated with higher ACE scores, hunger (skipped a meal in last week due to financial difficulties), death of a child, perceived sex work stigma and recent sexual/physical violence. PTSD was associated with higher ACE scores, hunger, increased STI prevalence (chlamydia trachomatis) and recent violence. Recent suicidal behaviour was associated with higher ACE scores, low literacy, hunger, and recent violence. Mental health problems and suicidal behaviour were less prevalent among women reporting social support.

**Conclusion.** The high burden of mental problems among FSWs indicates a need for accessible services tailored for FSWs alongside broader structural interventions addressing poverty, harmful alcohol/substance use and violence. High rates of ACEs among this population indicates the need to consider early childhood and family interventions to prevent poor mental health outcomes.

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### Prevalence of psychological stress and adopted coping strategies among healthcare workers in King Saud Medical City (KSMC)

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**Aims.** The present study aims at investigating the level of stress among Saudi healthcare workers during COVID-19 pandemic. In addition, the present study sought to identify the coping