ethics committees in Pakistan. We also conducted a discussion group (n = 13) with members of REC from Pakistan, Nigeria and Sri Lanka. The topic guide delved into the opinions of REC members regarding ethical issues that they have come across while reviewing self-harm/suicide-related research proposals, the relevance of these issues with specific study designs, recommendations to resolve these issues, their approach to balancing risk and benefit, and guidance for researchers.

Results. The preliminary findings from thematic analysis revealed five major themes; 1) Ethical challenges, 2) Reasons for application rejection, 3) Areas of improvement, 4) Suggestions for addressing ethical issues, and 5) Researchers' attitudes towards amendments. Challenges in self-harm and suicide research included the sensitivity and stigma surrounding the topic, lack of interest and support, and difficulties in participant recruitment. The application faced rejection from the ethics committees primarily due to methodological errors, lack of procedural clarity, and insufficient understanding of the research procedure. Identified areas for improvement were the need for enhanced methodology and research patterns, as well as a better understanding of the methodological procedure. Recommendations for developing a robust research proposal included training and supervision for intervention studies, the inclusion of comprehensive ethical elements and practical plans in the proposal, and a focus on data protection, confidentiality, risk management, and harm identification. While a significant number positively acknowledged reviewer comments, some researchers opted for in-depth discussions rather than directly addressing the issues.

Conclusion. The study highlights the importance of ethical considerations and emphasises the need to address the lack of robust methodological procedures in self-harm and suicide research. Addressing these challenges and adopting suggested improvements is paramount for advancing ethical and impactful research in this context.

Unravelling the Complex of Substance Use and Suicide: Insights From a Qualitative Study in Pakistan

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Aims. Suicide and substance use all contribute significantly to the global burden of mortality and morbidity. While existing evidence establishes the association between substance use and suicidal behaviour in Lower- and Middle-Income Countries (LMICs), only a few studies illustrate how substance use affected deceased people's lifestyles and suicide attempts. The study addresses this gap by exploring the role of substance use (particularly, alcohol and drug use) in overall lifestyles and suicides of deceased with substance use in Pakistan – an underexplored and under-researched country regarding suicide and substance use.

Methods. We conducted in-depth qualitative interviews (N = 11) with close relatives and friends of those who died by suicide and

have a history of substance use. The topic guide was comprised of a narrative part exploring the circumstances that surrounded the suicidal death of the deceased and a problem-focused part collecting comprehensive details about the deceased's personal, family, psychological, and social context and the role of substance use in the lifestyles and the suicide of the deceased.

Results. The content analysis of interviews revealed five key themes: 1) Reasons for suicide, 2) Personality traits, 3) Psychological distress, 4) Initiation of substance use, and 5) Suicidal tendencies. Most of the participants reported the reason for their loved one's suicide was either an overdose of drugs or alcohol, family dynamics, or societal attitudes such as difficulty in building trust and finding acceptance within the family or society. Deceased individuals were perceived as impulsive with low control over their emotional states. Participants highlighted the underlying psychological distress in the deceased, emphasising the complexity of mental health and substance use problems. Participants reported that the deceased initiated drugs at an early age; had suicidal ideations; and overdosed themselves as a means of suicide.

Conclusion. This study provides valuable insights into the role of substance use in suicide. The findings highlight the need for a holistic approach to understanding the multifaceted factors that may influence suicidal behaviours in individuals with substance use. Understanding these factors can help develop targeted suicide prevention and intervention strategies, particularly in low-resource settings such as Pakistan.

Therapeutic Patient Education for Severe Mental Disorders: A Systematic Review

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Aims. Therapeutic Patient Education (TPE) aims to help patients self-manage their chronic condition over their lifetime, adapting to their evolving circumstances, as well as changes in their condition and treatment. The National Institute for Clinical and Healthcare Excellence underscores the importance of patient education as a crucial part of early interventions for mental disorders. This systematic review aimed to review TPE programmes in managing psychiatric disorders, considering the diversity in delivering agents, intervention formats, targeted skills, and therapeutic outcomes.

Methods. Comprehensive database searches, including Web of Science, PubMed, and COCHRANE, were conducted from September 2019 to January 2023, yielding 514 unique records, with 33 making it through rigorous evaluation for full-text review. Eleven studies met the inclusion criteria, focusing on various psychiatric disorders such as depression, bipolar disorder, psychosis, and multiple serious mental illnesses. A total of 38 studies were included from our previous review to supplement the current database search.

Results. Among 49 included interventions, 13 were aimed at bipolar disorder, depression (n = 12), multiple serious mental illnesses and comorbidities (n = 11), schizophrenia and psychoses (n = 13). A total of 21 interventions were delivered in groups

followed by individual (n = 12), mixed format (n = 14) and electronically (n = 2).

TPE programmes exhibited diversity in delivering agents and intervention formats, with a notable presence of multidisciplinary teams and various professionals. The interventions prioritized coping strategies and disease management techniques, though the extent varied based on the disorder. Examining the different skills imparted during the interventions, the focus predominantly leaned towards the teaching of coping strategies. These encompassed both cognitive and behavioural coping skills, including areas such as self-confidence (n = 37), stress management (n = 39), critical thinking (n = 26), problem-solving (n = 18), goal setting (n = 31), situational awareness (n = 36), and self-care (n = 36), with unspecified coping skills also noted (n = 32).

Effectiveness was heterogeneous across studies; some interventions showed significant benefits in areas such as symptom management, coping, and functional improvement, while others reported no significant outcomes.

Conclusion. The findings underscore the potential of TPE in psychiatric care, revealing its multifaceted nature and varied impact. TPE not only addresses deficits but also leverages patients' existing strengths and capabilities. Despite the reported benefits, a portion of the interventions lacked statistical significance, indicating the necessity for continuous refinement and evaluation.

Modelling Clozapine Levels to Identify Safe Titration Targets and a Method for Precise Dose Adjustment

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Aims. A precision medicine approach to clozapine dosing aims to personalise it in two ways: i) during titration, and ii) for succeeding dose adjustments. This requires valid models of dose/concentration relationships, but cross-sectional models suffer from population-level artefacts and individual problems due to poor adherence or stopping smoking. Longitudinal data sets from two mental health trusts allowed poor adherence and smoking cessation to be identified. We then modelled dose/concentration relationships to construct personalised targets for i) and ii).

Methods. Demographics and co-prescribed medication were recorded for 137 patients from Greater Manchester Mental Health (GMMH) Trust who had two or more successive plasma levels and doses from 2016–2018. 412 patients from Pennine Care Foundation Trust (PCFT) who had successive plasma levels and doses from 2009–2023 were also recorded. In each sample, adherent patients (88 from GMMH and 371 from PCFT) were identified after excluding: > two-fold variation between blood samples in clozapine/norclozapine ratios, > two-fold variation in dose/concentration ratios, a clozapine/norclozapine ratio > 3, or a dose/concentration ratio > two standard deviations from the sample mean. Those whose smoking status (smoker vs non-smoker) changed between samples were excluded.

To identify i) titration targets, we used raw data in first samples (checked with logistic regression) to identify dose thresholds which produced most levels above 0.35 µg/ml (therapeutic) and no levels greater than 1 µg/ml (toxic). To model ii) effective dose adjustment, we used the equation $Dt = Dc(Ct/Cc)$ to identify the most effective dose for the second samples. Dt was target dose, Dc current dose, Ct target level (0.45 µg/ml), and Cc current level.

Results. First sample dose/concentration ratio in adherent patients correlated r > 0.75 with second samples' dose/concentration. >84% of plasma levels were within 20% of the mean across both samples.

i. The GMMH dataset titration targets were 325 mg, 300 mg, 225 mg, and 175 mg daily for male smokers, female smokers, male non-smokers, and female non-smokers, respectively. In PCFT, data suggested corresponding targets of 375 mg, 325 mg, 225 mg and 175 mg. Targets avoided toxicity and gave therapeutic levels in > 50% of cases.

ii. Target dose, ascertained using the equation, and actual second dose were compared: in adherent cases, toxicity only occurred when actual doses were 1.5-fold greater than target dose, and above target all plasma levels exceeded 0.35 µg/ml in GMMH. PCFT data appeared similar.

Conclusion. Relatively safe and effective titration targets for smokers and non-smokers from both sexes were identified. A simple equation would improve precision and effectiveness of dose adjustment thereafter.

Benzodiazepine Use Disorder Observed and Diagnosed in a Tertiary Care Pediatric Specialty Clinic: A Descriptive Retrospective Chart Review

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Aims.

Objectives: In youth and young adults, it is common to encounter non-medical use of benzodiazepines, defined as use without a prescription or use for reasons other than that for which the medication is intended. Benzodiazepine use disorder remains understudied and overlooked, especially in youth and young adults. The primary objective of our study was to highlight the proportion of youth and young adults with aberrant use of benzodiazepines and diagnosed with benzodiazepine use disorder in a single centre. The secondary objective was to determine factors associated with aberrant benzodiazepine use and benzodiazepine use disorder in that sample.

Methods. This retrospective chart review screened for benzodiazepine use in 310 adolescent patients aged 12–19 seen for the first time in a concurrent disorders clinic, at a tertiary care clinic in Canada. Of those 310 patients, 167 were included in the final chart review.

Results. 97.6% of patients who used benzodiazepines demonstrated aberrant use, and 39.3% of patients received a diagnosis of benzodiazepine use disorder.

Conclusion. This review showed that a substantial percentage of youth and young adults in a concurrent disorders clinic in