

Objectives: This study aims to explore environmental and social risk factors for mental health issues using network analysis.

Methods: The study was conducted among a nationally representative sample of 2,701 habitants of Poland (51% of women). The measurements used were PHQ-9, UCLA, Neighbourhood Cohesion (Neighbourhood Belonging and Social Cohesion), REAT 2.0 (Quality of architecture conditions in neighbourhood area), distance and frequency use of blue, green, and urban public areas, Self-Rated Health, Physical Activity, urbanicity, size of place of residence per person and sociodemographic survey (age, education, income). We used a sparse Gaussian graphical model (GGM) with a graphical lasso with an EBIClasso estimator.

Results: We showed that urbanicity and physical environment were linked to mental health issues via neighbourhood cohesion and loneliness in the estimated network. Depression and anxiety were the nodes with the highest centrality strength and expected influence. Blue and green areas usage also had high centrality strength. Urbanicity played an important role as a bridge between the network nodes and had a high strength score. Physical health with blue and green areas frequency use had the highest closeness centrality score.

Conclusions: We revealed the connections among mental health, loneliness, social cohesion, and various environmental factors, particularly urbanicity. This will enhance our understanding of mental health risks and protective factors.

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Disclosure of Interest: None Declared

Suicidology and Suicide Prevention

O017

Moderating effects of the effectiveness of psychological interventions for suicide behavior and non-suicidal self-harm prevention in prison settings: a systematic review and meta-analysis

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Introduction: Suicide remains a major cause of death in prison (Status report on prison health in the WHO European Region 2022). In comparison with adults from general population, incarcerated people are at increased risk of presenting suicide-related behaviours (Fazel S, *et al.* Lancet Psychiatry 2017; 4 946–52). Although certain studies have identified effective programs to reduce suicide in prison context (Carter A, *et al.* EclinicalMedicine 2022; 44 101–266), there is little evidence examining the relationship between moderators of effectiveness at individual and contextual levels.

Objectives: This study aims to review empirical research on moderators of effectiveness of interventions in prison to reduce suicide, summarizing effect sizes across studies.

Methods: For this systematic review and meta-analysis, we searched EBSCOhost, ScienceDirect, PubMed and ProQuest for articles published from 1990 to 2024. Eligible studies included those evaluating the effect of psychological interventions, delivered to adults during incarceration, on suicidal prevention. The impact of moderators covering bibliometric features (i.e. year of publication, country), methodological features of the study (i.e. sample size, mean age of participants, sex ratio, study design, assessment type and tools), suicide-related features (main outcome, previous suicide history), and other relevant variables (prison type and location, type and length of sentence) as well as psychological traits (alcohol or drugs misuse or other treatments) were also included. This review was conducted in accordance with PRISMA guidelines. Meta-analyses using random-effect models were used to pool effect sizes for moderators' outcomes. The protocol was pre-registered with PROSPERO, CRD42024538967.

Results: Of 7728 articles retrieved, 18 studies (1695 participants, 330 [19.5%] females, 756 males [44.6%], and 609 [35.9%] unknown) met the inclusion criteria. Mean ages were 32.0 years, and ethnicity data was not sufficiently reported to be aggregated. Type of prison was mostly public sector and located in rural areas. Studies were frequently conducted in UK ($n=8$; 44%) and used varying study designs; most frequently pre-post with no control group ($n=9$; 50%). On average, prevention programs in prison context were effective in decreasing suicide deaths, suicidal ideation and self-harm ($n=14$; 78%).

Conclusions: Findings suggest that explanations for efficiency of psychological interventions to prevent suicide behaviour and self-harm in prison context, are moderated by physical environment, individual and psychosocial factors. Future research identifying what factors moderate treatment outcomes in suicide and self-harm prevention within prison environments could help elucidate associated factors of efficiency, helping develop potential therapeutic actions.

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Precision Psychiatry

O020

Combining structural MRI with Polygenic Risk Scores to disentangle unipolar and bipolar depression: a multimodal machine learning study

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Introduction: The differential diagnosis between Major Depressive Disorder (MDD) and Bipolar Disorder (BD) heavily relies on clinical observation. However, the two disorders often show similar symptomatologic profiles, leading to high misdiagnosis rates. Reliable biomarkers are therefore crucial to accurately discriminate between MDD and BD and provide better treatments. In this