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To Prevent Arrest and Convictions, Prescribe Antipsychotics

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Recently, this journal published an article by Sariaslan, Leucht, Zetterqvist, Lichtenstein, and Fazel (2021), which describes a cohort of individuals prescribed antipsychotics in Sweden between 2005-2013. The authors provide a methodologically rigorous study with a large sample (n = 74 925) from several national databases that control for time-invariant confounders (e.g., demographic characteristics). They conclude that periods of absence of antipsychotic prescription among individuals with psychotic disorders are associated with higher rates of arrests and convictions (Sariaslan et al., 2021). We applaud Sariaslan et al. for their clever study design but have several concerns and questions about the motives and message of the paper. We found that they did not sufficiently cover the complex background of literature on antipsychotic prescription, which weakens their supposition of covering time-invariant factors. Their broadly defined constructs, such as "crime rates," also seemed misleading. They furthermore may stigmatize mental illness by promoting antipsychotics as a criminogenic intervention.

For one, the paper concludes that antipsychotics may effectively reduce arrests and convictions in patients with psychotic disorders. However, they ignore important social and environmental factors that confound these conclusions. For instance, a foundational study in the World Journal of Psychiatry (Schwartz & Blankenship, 2014) established that Black and African American healthcare consumers are diagnosed with psychotic disorders at a rate three or four times higher than White consumers— with a similar trend for immigrants.

In Sweden, these findings hold; Black citizens and immigrants receive psychotic disorder diagnoses at a higher rate and are more likely to be compulsorily admitted (e.g., (Al-Saffar et al., 2004). The racial bias in the mental health system and policing puts into question both the ecological validity and implications of the observed between-person associations. The current climate in Sweden regarding race and immigration is an important consideration. Some believe that immigrants increase crime—though they have decreasing rates of crime and face several challenges integrating into society (Vasiljevic et al., 2020). Thus, these researchers had a crucial task to carefully consider the literature as not to advance stereotypes or prejudices.

Sariaslan et al. also seem to causally link the use of individual antipsychotics to decreasing arrests and convictions. Nevertheless, this study is observational and only *associations* are present. The study does not account for several time-variant covariates like vulnerability/medical delay situations linked to the absence of prescription. Equally, some analyses appear underpowered (e.g., clozapine's association with arrests and convictions). Despite these limitations, the authors infer causation, discussing potential mechanisms of individual antipsychotics like clozapine. Sariaslan et al. even suggest that these associations could sway clinical decision-making, which in both cases are conclusions much ahead of the presented evidence.

Several methodological limitations must be considered since the study used measures like arrest and convictions. The authors refer to these measures as "crime rates," which is a misnomer. We should not conflate arrest and conviction rates with crime rates. There are many biases in criminal justice towards individuals with mental illnesses. Individuals with mental illnesses are perceived as dangerous, more prone to arrest or detention, and more prone to victimization or death by police (independent of criminogenic factors) (Jun et al., 2020; Saleh et

al., 2018; Watson et al., 2004). Given the many external criminal and judicial processes that contribute to arresting and conviction rates, it is unclear how arrests and convictions relate to personal medication.

Equally, there are several potential issues with using periods of antipsychotic medication as an index. The article lacks a clear description of patient characteristics—whether the psychotic and non-psychotic disorders groups differed or whether those prescribed specific medications differed either. In addition, we do not know if patients have more than one prescribed antipsychotic or more than one diagnosis (except substance use disorders). Importantly, antisocial traits are linked to the aggression seen in individuals with psychotic disorders (Hodgins, 2017). Subgroups could exist in this data that are unknown to the authors, even within the non-psychotic disorder comparison group, as antisocial personality and other relevant disorders are combined with other disorders that may dampen the effects of more relevant subgroups.

The article contains additional ambiguities, which shroud the reader from making a critical analysis. As readers, we relied on the authors' interpretations and eyeballing of graphs to conclude about the article, rather than a priori thresholds or other objective data (e.g., "similar" magnitudes or lacking "material differences"). We also wondered what "rate reduction" meant in the paper: a percentage change or a percentage point change in arrests and convictions? The authors refer several times to interpretations made about the data from figures in the supplements; nevertheless, they do not provide true values, and some figure legends (such as Figures 1 and 2) are unclear. A squabble that is becoming increasingly important to specify: do the authors mean biological sex or gender when referring to men and women? The sex and gender of participants have different implications and may assist in clinical decision-making (e.g., sex-based differences in medication efficacy).

Perhaps the most worrying effect of this publication is that it may create stigma or misunderstanding among policymakers, patients, and clinicians alike. The study replicates previous work, adding only one novel aspect: the individual antipsychotic approach. Despite that in Sariaslan et al., only 7% (n = 5 582) of the sample had a continuous antipsychotic prescription, and that there are a bevy of adverse effects of continuous antipsychotic use, the authors are highly motivated to suggest *to prevent arrest and convictions, prescribe X*. They miss the many social and environmental factors that are included in clinical decision making and an opportunity for criminal/social programming. If a crime has occurred, it can be driven by factors other than psychotic symptoms (Bolanos et al., 2020). There is evidence that criminal risk factors are more strongly associated with criminal justice involvement than psychiatric symptoms (Bolanos et al., 2020). Many may find it challenging to understand Sariaslan et al.'s argument, as it implies prescribing medications responds to the criminogenic needs of individuals with psychotic disorders.

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