



Exploring Treatment Quality and its Association with the Onset of First-Stage Psychosis: A Research Investigation

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Abstract

The utilization of cannabis subsequent to the onset of first-episode psychosis has been associated with heightened risks of relapse and non-adherence to antipsychotic medication. However, it remains unclear whether the adverse impact of cannabis on medication adherence directly contributes to the unfavorable outcomes linked with cannabis use. There is a possibility that interventions aimed at improving medication adherence could partially alleviate the negative effects of cannabis use in individuals experiencing psychosis.

Keywords: Psychosis; Antipsychotic; Cannabis; Medication

Introduction

After the first episode of psychosis, the risk of relapse poses a significant challenge for healthcare systems globally, impacting both individuals and society at large. Relapse within the initial years following the onset of psychosis is a critical determinant of long-term clinical and functional outcomes [1]. Thus, identifying modifiable risk factors influencing relapse is paramount, as preventing relapse is a key treatment objective. Non-adherence to medication and continued cannabis use following psychosis onset are consistently identified as modifiable risk factors influencing relapse [2]. These factors are unlikely to result from confounding or reverse causation. Despite their well-established multifactorial nature, there remains limited understanding of their effects in psychotic patients, despite their prevalence. Cannabis use may negatively impact psychosis outcomes by influencing adherence to antipsychotic medication, as previous studies have shown that controlling for medication adherence reduces the effect of cannabis use on relapse risk [3]. Furthermore, independent evidence confirms a significant effect of continued cannabis use on antipsychotic medication adherence in psychotic patients [4]. However, the extent to which non-adherence to prescribed medications mediates the relationship between cannabis use and psychotic relapse has not been systematically examined. By elucidating the mechanistic pathway from cannabis use to psychosis relapse, we may identify alternative intervention targets to mitigate harm from cannabis use. Therefore, this study aims to investigate whether the association between cannabis use and medication adherence can explain some of the negative effects of continued cannabis use on relapse risk. Specifically, we seek to determine if medication adherence partially or entirely mediates the relationship between continued cannabis use and relapse risk, and if there are mediation effects on other relapse-related outcomes such as number of relapses, duration of relapse, time before relapse, and level of care.

Methods

As part of a follow-up study aiming to investigate the role of cannabis use within the first two years after the onset of psychosis, all patients in this prospective analysis were recruited from four distinct adult inpatient and outpatient units of the South London and Maudsley Mental Health National Health Service Foundation Trust in Lambeth, Southwark, Lewisham, and Croydon. These patients, referred to local psychiatric services in south London, UK, had a clinical diagnosis of first-episode non-organic psychosis and were aged between 16 and 74 years old. Details regarding data collection and assessment strategies

have been previously discussed. Ethical approval for this study was obtained from the Institute of Psychiatry Local Research Ethics Committee and South London & Maudsley NHS Foundation Trust. Each patient who participated in the study provided written informed consent.

Result and Discussion

This study serves as a primary investigation into the role of medication adherence as a mediator in the relationship between continued cannabis use following psychosis onset and relapse, as indicated by hospital admission, in patients experiencing first-episode psychosis [5]. Our findings suggest that the association of cannabis use with non-adherence to prescribed antipsychotic medication partially mediates the negative effects of continued cannabis use on relapse risk. Specifically, medication non-adherence mediated various relapse-related outcomes, including the risk and number of relapses, duration before relapse occurrence, and care intensity index at follow-up. However, the duration before relapse was not mediated by medication non-adherence.

Patients with first-episode psychosis who continue to use cannabis frequently may experience a relapsing form of the illness, partly explained by our observation that such patients are more likely to be non-adherent to prescribed medications. Previous studies have indicated that cannabis use, particularly post-onset use, is associated with relapse of psychosis leading to hospital admission, likely indicating a causal relationship [6]. Our study builds upon this evidence by demonstrating that medication adherence influences the negative impact of continued cannabis use on early psychosis outcomes.

Our findings also suggest that the negative impact of cannabis use on subsequent relapse risk in first-episode psychosis may be partially mediated by the failure of antipsychotic treatment, as indicated by the

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number of unique prescriptions for antipsychotic medications [7]. However, it remains unclear whether treatment resistance or poor tolerability additionally mediates some of the effects of cannabis use on relapse of psychosis.

Efforts to reduce marijuana use among patients with psychosis should continue to develop more effective interventions, such as cannabis-focused treatment programs currently under evaluation. Additionally, improving patient adherence to prescribed medication could be another potential approach to mitigate the harm from cannabis use [8]. Nevertheless, it is important to acknowledge that despite the mediation effect identified, there remains a significant amount of unexplained variance in relapse risk and related outcomes. Future studies with larger samples are needed to explore other risk factors and more complex model pathways to address this issue [9].

As an observational study, there may be potential biases such as transient ambiguity between the mediator and outcome variable, as well as unmeasured confounders, which may have influenced our results. Although alternative path models were considered, they did not support cannabis use as a mediator of the associations between medication adherence and relapse outcome. The study's limitations include the selection of a specific group of inner-city patients with first-episode psychosis, as well as the retrospective assessment of cannabis use and medication adherence. However, the inclusion criteria were unlikely to have affected the study's results [10].

It remains unclear how poor medication adherence among psychotic patients may be caused by continued cannabis use. Although this possibility was not explored in our study, future research should investigate whether increased severity of psychosis due to continued cannabis use leads to impaired insight or memory, thus contributing to poor adherence.

Conclusion

Our findings suggest that up to 33% of the adverse impact of marijuana use on outcomes in first-episode psychosis could be mitigated through its effect on medication adherence. This implies

that interventions aimed at improving medication adherence could partially help alleviate the detrimental effects of marijuana use on outcomes in psychosis.

Acknowledgement

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Conflict of Interest

None

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