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Association between Polypharmacy and Cognitive Limitations among Adults with Depression in the United States

Author Block: Mohammed Amaan Shaikh, DPharm¹, MOHAMMAD IKRAM, PhD, MBA, MS², **Nazneen Fatima Shaikh, PhD³**.

¹University of Mumbai, Mumbai, India, ²Penn State University, Harrisburg, PA, USA, ³Real World Solutions, IQVIA Inc., Durham, NC, USA.

Abstract:

OBJECTIVES: Cognitive impairment is often observed in patients with depression. Recent studies have suggested an association between polypharmacy and cognitive impairment. Therefore, this study aimed to assess the relationship between polypharmacy and cognitive limitations among adults with depression.

METHODS: A retrospective cross-sectional analysis of adults (≥ 18 years) with depression using data from the 2022 Medical Expenditure Panel Survey (MEPS) was conducted. Polypharmacy was defined as at least six drug classes used concurrently. MEPS provides a measure of cognitive limitations (yes/no) based on self-reported responses to questions on experiencing confusion or memory loss, having problems making decisions, or requiring supervision for their safety. Chi-square tests and multivariable logistic regressions were performed to analyze the unadjusted and adjusted associations between polypharmacy and cognitive limitations. All analyses accounted for the complex survey design of MEPS.

RESULTS: A total of 1,742 adults with depression were identified. The majority of the study population was female (68.2%) and White (75.5%) with a mean age (standard deviation) of 53.1 (± 17.5) years. Overall, 38.9% had polypharmacy and 17.9% had evidence of cognitive limitations. A higher proportion of adults with polypharmacy had cognitive limitations than adults without polypharmacy (27.6% vs 9.7%; p-value < 0.001). In the multivariable logistic regression after adjusting for potential confounders, adults with polypharmacy had higher odds of cognitive limitations (AOR [95% confidence interval]: 1.89 [1.17-3.04]; p=0.009) compared to those without polypharmacy.

CONCLUSIONS: Polypharmacy was significantly associated with higher cognitive limitations among patients with depression. The rising number of depression patients coupled with the use of polypharmacy may worsen cognitive outcomes leading to a substantial impact on patients' quality of life. This underscores the need for future longitudinal studies to verify the causal association between polypharmacy and cognitive impairment in depression patients.

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Submitter and Disclosure (Complete):

First Name : Mohammad

Last Name : Ikram

Email : mikram2@pennstatehealth.psu.edu

Institution : Penn State University

City : Harrisburg

State/Provinces: Pennsylvania

Country: United States

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Lawrenceville, NJ 08648, USA
Tel: 1-609-586-4981 - Toll Free: 1-800-992-0643
conferences@ispor.org

TECHNICAL SUPPORT:

217-398-1792 (Monday through Friday 8:00 am-5:00 pm Central Standard Time)
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