

Neuroleptic therapy compliance differs among patients treated by different psychiatrists

Karel Kostev¹, Rebecca Zingel¹, Marcel Konrad³

¹ IQVIA, Epidemiology, Frankfurt am Main, Germany

² FOM University of Applied Sciences for Economics and Management, Frankfurt, Germany



Background

- Influential literature has shown that the prescription of antipsychotics is associated with a significant decrease in the symptoms of schizophrenia [Leucht et al., 2013] and bipolar disorder [Cruz et al., 2010].
- Thus far, no studies have been published examining the influence of the physician on the compliance of his/her psychiatric patients.
- The present study aims to close this gap. The aim of this study was to investigate the effect treating physicians have on the compliance of their psychiatric patients.

Methods

- This study was based on data from the Disease Analyzer database (IQVIA), which compiles drug prescriptions, diagnoses, and basic medical and demographic data obtained directly and in anonymous format from computer systems used in the practices of general practitioners and specialists [Rathmann et al., 2018].
- This retrospective study included schizophrenia patients (ICD-10: F20) and bipolar disorder patients (F31) who had received at least two prescriptions for antipsychotic drugs (ATC: N05) in 55 neuropsychiatric practices in Germany between January 2016 and December 2018. Practices with less than ten patients receiving antipsychotic drugs were excluded.
- Adherence was measured indirectly and was based on the medication possession ratio (MPR). MPR is defined as the percentage of days covered by the supply of a specific drug over the observation period, from the time the drug is dispensed until the first documented refill (e.g., if 60 days pass between the initial prescription of a medication and a consecutive refill, while the first prescription only covers a 30-day period of medication, the MPR is 50%). The MPR per patient can vary between 0% and 100%. Patients were considered adherent if their MPR was greater than or equal to 80%. Practice adherence was high if the practice of interest had at least 70% adherent patients (i.e. with an MPR ≥80%).
- The Pearson correlation coefficient was used to estimate the correlation between the proportion of schizophrenia patients with an MPR ≥80% and the proportion of bipolar disorder patients with an MPR ≥80% in each practice. Finally, two multivariate logistic regressions were conducted to investigate the impact of defined variables on the odds of high practice adherence (i.e. ≥70% of patients with an MPR ≥80%) in patients with schizophrenia or patients with bipolar disorder. Independent variables included in the regression models were mean age of patients per practice, proportion of men per practice, proportion of schizophrenia or bipolar disorder patients per practice, proportion of schizophrenia or bipolar disorder patients receiving second-generation antipsychotics per practice, and mean total number of patients per practice and per quarter

Baseline characteristics of study patients

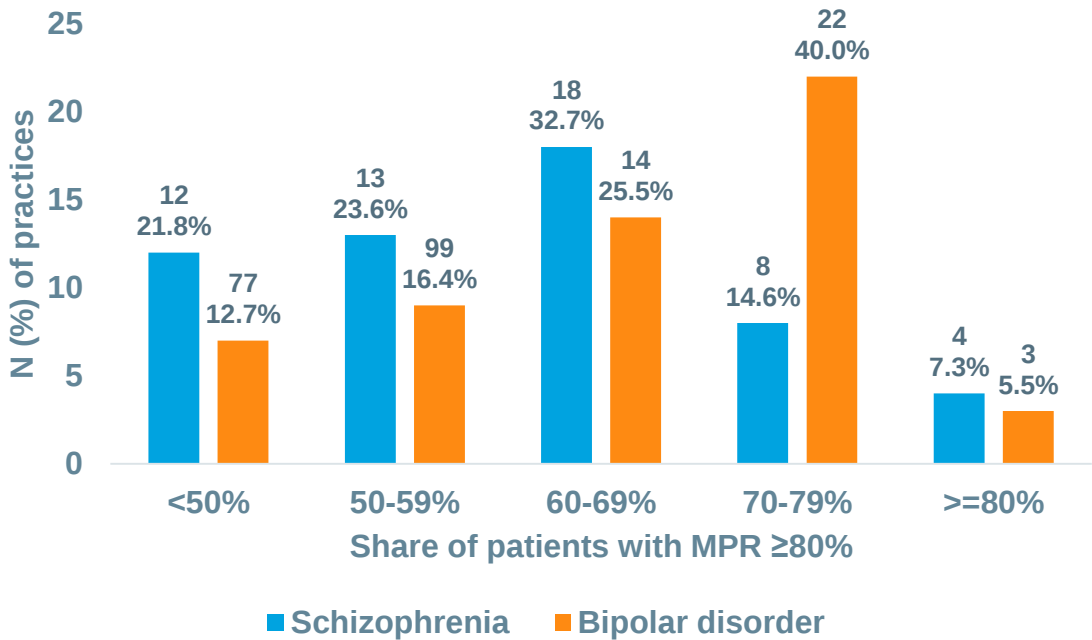
Variable	Proportion (%) or mean (SD)	
	Schizophrenia	Bipolar disorder
Mean age of patients per practice	57.4 (9.5)	56.3 (5.5)
Mean proportion of men per practice	33.5 (10.1)	33.0 (9.5)
Mean proportion of schizophrenia and bipolar disorder patients per practice	52.1 (42.9)	42.3 (22.4)
Mean proportion of patients receiving second-generation antipsychotics per practice	67.7 (10.1)	68.8 (10.5)
Mean total number of patients per practice and per quarter ^a	1,444 (996)	1,444 (996)

Prof. Dr. Karel Kostev, Scientific Principal, Epidemiology, IQVIA
Unterschweinstiege 2-14 60549 Frankfurt am Main
+49 69 6604 4878 E-Mail: karel.kostev@iqvia.com

Results

- The mean MPR was 59.8% (SD=13.9%) in participants with schizophrenia and 65.0% (SD=11.5%) in those with bipolar disorder. The proportion of schizophrenia patients with an MPR ≥80% was moderately correlated with the proportion of bipolar disorder patients with an MPR≥80% in each practice (Pearson correlation coefficient of 0.45, p-value<0.001). The prevalence of practices with high adherence (i.e. ≥70% of patients with an MPR ≥80%) was lower for schizophrenia than for bipolar disorder (21.9% versus 45.5%)

Proportion of practices with different shares of schizophrenia and bipolar disorder patients having a MPR ≥80% in antipsychotic therapy



- Although no variable significantly predicted the odds of high practice adherence, in the regression model of schizophrenia patients the proportion of men per practice tended to be negatively associated with the dependent variable. In the model of individuals with bipolar disorder, the proportion of patients receiving second-generation antipsychotics was identified as a significant predictive factor for high practice, and we observed a tendency for a positive association between mean age of patients and high practice adherence stronger in men than in women.

The association between predefined variables and the odds of high practice adherence (i.e. ≥70% of patients with a MPR ≥80%) in individuals with schizophrenia or bipolar disorder

Variable	Schizophrenia		Bipolar disorder	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Mean age of patients per practice	0.95 (0.88-1.03)	0.220	1.12 (1.00-1.27)	0.059
Mean proportion of men per practice	0.93 (0.87-1.03)	0.092	0.99 (0.92-1.06)	0.769
Mean proportion of schizophrenia and bipolar disorder patients per practice	0.99 (0.97-1.01)	0.401	1.02 (0.99-1.05)	0.306
Mean proportion of patients receiving second-generation antipsychotics per practice	1.00 (0.92-1.08)	0.952	1.08 (1.01-1.15)	0.026
Mean total number of patients per practice and per quarter	1.01 (0.95-1.09)	0.611	0.96 (0.89-1.04)	0.294

Conclusions

- The proportion of practices with high adherence was lower in the schizophrenia than in the bipolar disorder group (22% versus 46%). But the high correlation was observed between adherence of schizophrenia and bipolar patients per practice.
- Psychiatrists play an important role in the compliance of SP and BP patients treated with neuroleptics.

References

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