Physical illnesses in psychiatric and general population

A network analysis

Ivona Šimunović Filipčić¹, Žarko Bajić², Marina Šagud^{1,3}, Igor Filipčić^{2,3,4}

¹Department of Psychiatry and Psychological Medicine, University Hospital Center Zagreb, Zagreb, Croatia; ²Psychiatric Hospital “Sveti Ivan”, Zagreb, Croatia; ³School of Medicine, University of Zagreb, Zagreb, Croatia; ⁴Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

OBJECTIVE: The authors examined the differences in the networks of self-reported chronic physical illnesses (CPI) in psychiatric patients (PP) and the general population (GEP).

BACKGROUND: Converging evidence suggests that PP have a higher prevalence of CPI and multimorbidity than the GEP. However, there is the evidence-based knowledge gap between multimorbidities and different, prevalent, single CPI, and is partially caused by the complexity of the proper analysis.

MATERIALS AND METHODS: We utilized data from two large samples, one from the population of PP (n=926), and the other from the GEP (n=584). We performed the network analysis of 12 self-reported CPI, and the network comparison test to analyze the particular CPI impact on the networks strength and structure.

Results: Two groups were comparable regarding the age and the use of non-psychiatric medication. The prevalence of any CPI was significantly higher in PP (RR=1.36; CI95% 1.23-1.50). However, the global strength and structure of the CPI networks in the two populations were not significantly different (p=0.190, p=0.140, respectively). Considering all three centrality indices, the most central CPI in both population was hypertension.

CONCLUSIONS: The global strength and structure of CPI networks are not significantly different between PP and GEP, indicating that the causal mechanisms of specific multimorbidity patterns may be similar in both population. Organized and accessible somatic medicine integrated into the psychiatric treatment may be a pillar to improve the physical health in the psychiatric population. Further, interventions focusing on prevention, early recognition, and treatment of hypertension represent priority.

	General population (n=584)	Psychiatric patients (n=926)
Gender		
male	271 (46.4)	497 (53.7)
female	313 (53.6)	429 (46.3)
Age (years), median (IQR)	45 (32-55)	46 (35-55)
Any non-psychiatric medication used during the last two weeks	247 (42.4)	418 (46.8)
Psychiatric patients		
Psychiatric disorder*		
Schizophrenia, schizotypal and delusional disorders (F20-F29)		327 (36.2)
Mood (affective) disorders (F30-F39)		305 (33.8)
Neurotic, stress-related and somatoform disorders (F40-F48)		288 (31.9)
Disorders of adult personality and behavior (F60-F69)		232 (25.7)
Mental and behavioral disorders due to psychoactive substance use (F10-F19)		190 (21.0)
Organic, including symptomatic, mental disorders (F00-F09)		74 (8.2)
Behavioral syndromes associated with psychological disturbances and physical factors (F50-F59)		33 (3.7)
Other		33 (3.7)
Number of psychiatric disorders		
one		431 (46.5)
two		315 (34.0)
three or more		180 (19.4)
Previous psychiatric hospitalizations, median (IQR)		2 (0-5)
Duration of primary psychiatric disease (years), median (IQR)		5 (1-11)
Medication		
antipsychotics		519 (56.0)
1 st generation		176 (19.3)
2 nd generation		411 (45.1)
clozapine		69 (7.6)
antidepressants		557 (60.2)
SSRI		320 (34.6)
SNRI		126 (13.6)
NaSSA		66 (7.1)
other antidepressants		47 (5.1)
benzodiazepines		758 (81.9)

Data are presented as number (percentage) of participants if not stated otherwise. Abbreviation: IQR= interquartile range. Data were missing on education for 3 (0.5%) of participants from the general population and for 2 (0.2) of psychiatric patients; on marital status for 4 (0.7%) of participants from the general population and for 10 (1.1%) of psychiatric patients; on non-psychiatric medication for 2 (0.3%) participants from the general population and 33 (3.6%) of psychiatric patients; for psychiatric diagnosis in 23 (2.5%) of participants.* Total exceeds 100% because of psychiatric comorbidities