ORIGINAL RESEARCH

80. Psychiatric Comorbidities and Mortality After Heart Failure Hospitalization: Evidence of a Survival Paradox from a Nationwide Cohort

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Introduction: Psychiatric comorbidities may influence survival outcomes among patients hospitalized for heart failure (HF), yet their individual effects on short- and long-term mortality remain underexplored. Conditions such as depression, bipolar disorder, PTSD, and schizophrenia often coexist with HF and may affect outcomes through mechanisms like poor self-care, reduced treatment adherence, and neurohormonal dysregulation. Psychiatric illness is also associated with increased healthcare utilization, delayed care-seeking, and fragmented follow-up, factors that may compound cardiovascular risk. These comorbidities are frequently underdiagnosed or undertreated in cardiovascular populations, making it critical to understand their prognostic significance. Despite the high prevalence of these comorbidities, limited research has evaluated their direct contribution to mortality following HF hospitalization at a national level. Clarifying how specific psychiatric diagnoses impact mortality may guide risk stratification and inform more tailored post-discharge interventions.

Methods: We conducted a retrospective cohort study using the Nationwide Readmissions Database (NRD), spanning 2016 to 2022. Adult patients (≥18 years) hospitalized with a primary diagnosis of HF were included. Psychiatric comorbidities were identified via ICD-10 codes for depression, anxiety, bipolar disorder, schizophrenia/psychotic disorders, PTSD, and substance abuse disorder. Outcomes included 30-day and 1-year mortality, evaluated using multivariable logistic regression models adjusted for demographic, socioeconomic, and hospital-level characteristics. Among 31,886,859 weighted hospitalizations, several psychiatric comorbidities were significantly associated with lower mortality.

Results: Compared to patients without these conditions, those with bipolar disorder had reduced odds of 30-day mortality (OR 0.70, 95% CI: 0.67–0.73, p<0.001) and 1-year mortality (OR 0.72, 95% CI: 0.69–0.74, p<0.001). Similar reductions were observed for schizophrenia/psychotic disorders (30-day OR 0.79; 1-year OR 0.83, both p<0.001), PTSD (30-day OR 0.71; 1-year OR 0.75, both p<0.001), and substance abuse disorder (30-day OR 0.81; 1-year OR 0.86, both p<0.001). Depression was also associated with decreased mortality (30-day OR 0.88; 1-year OR 0.88, both p<0.001). Anxiety showed no significant impact on mortality at either time point.

Conclusion: In this large, nationally representative cohort of hospitalized heart failure patients, most psychiatric comorbidities, including bipolar disorder, schizophrenia/psychotic disorders, PTSD, depression, and substance use disorder, were independently associated with significantly lower 30-day and 1-year mortality. Only anxiety showed no significant association with mortality. These findings challenge conventional assumptions about the uniformly negative prognostic impact of psychiatric illness in cardiovascular populations. Instead, they suggest a complex interplay between mental health conditions, healthcare engagement, and survival outcomes, possibly reflecting enhanced monitoring, increased resource utilization, or competing risks. This paradoxical survival benefit underscores the importance of diagnosis-specific analysis in psychiatric-cardiovascular research and calls for further investigation into the mechanisms driving these associations. Tailoring post-discharge strategies to reflect the nuanced prognostic profiles of psychiatric subgroups may improve both clinical outcomes and healthcare delivery.

Table 1. Multivariable Associations Between Psychiatric Disorders and 30-Day and 1-Year Mortality

	30-day Mortality	Multivariable		1-year Mortality	Multivariable	
	% (SE)	OR (95 %CI)[2]	p-value	% (SE)	OR (95 %CI)[2]	p-value
Depression No Yes	7.16 (0.015) 6.04 (0.034)	REF 0.88 (0.87, 0.89)	0.001	5.94 (0.009) 5.01 (0.022)	REF 0.88 (0.86, 0.88)	0.001
Anxiety No Yes	6.99 (0.014) 6.14 (0.024)	REF 1.01 (0.93, 1.10)	0.77	5.79 (0.009) 4.95 (0.15)	REF 0.97 (0.91, 1.04)	0.41
Bipolar Disorder No Yes	7.08 (0.014) 3.61 (0.064)	REF 0.70 (0.67, 0.73)	0.001	5.85 (0.009) 3.16 (0.043)	REF 0.72 (0.69, 0.74)	0.001
Schizophrenia/psychotic disorders No Yes	7.05 (0.014) 3.96 (0.077	REF 0.79 (0.76, 0.82)	0.001	5.83 (0.009) 3.56 (0.052)	REF 0.83 (0.80, 0.86)	0.001
PTSD No Yes	7.02 (0.014) 3.50 (0.10)	REF 0.71 (0.67, 0.76)	0.001	5.82 (0.009) 3.14 (0.079)	REF 0.75 (0.72, 0.79)	0.001
Substance Abuse Disorder No Yes	7.61 (0.016) 4.69 (0.026)	REF 0.81 (0.80, 0.83)	0.001	6.24 (0.01) 4.07 (0.016)	REF 0.86 (0.85, 0.86)	0.001

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