

Risk factors associated with youth psychiatric hospitalizations: a multilevel approach using data from the 100 Million Brazilian Cohort

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Interpersonal violence was the main risk factor for psychiatric hospitalization among low-income youth in Brazil, 2011-2018

BACKGROUND

Youth psychiatric hospitalization has been associated with negative outcomes, including premature death, post-discharge self-harm and school dropouts.^{1,2} Identifying risk factors for youth psychiatric hospitalization is crucial for informing prevention strategies. We aimed to evaluate the risk factors for psychiatric hospitalizations among low-income youth in Brazil.

METHODS

- **Design:** Retrospective cohort study.
- **Data source:** Records from the National Hospital Information System and the Information System for Notifiable Diseases – Violence subset linked to the 100 Million Brazilian Cohort baseline.
- **Population:** 9,985,917 youths aged 5–24 who enrolled at the baseline between 2011 and 2018.
- **Follow-up:** It began on the cohort entry date for individuals aged 5 to 24, or on their 5th birthday if they turned 5 during follow-up. It ended at the earliest of the following events: the individual's 25th birthday, death, psychiatric hospitalization, or the cohort end date on December 31, 2018.
- **Statistical Analyses:** Risk factors for youth psychiatric hospitalization were measured by a multilevel multivariate Cox proportional hazards regression analysis allowing for municipality and region of residence random effects.

RESULTS

- 5,842 (0.05%) youth were hospitalized.
- Interpersonal violence victimization was the main risk factor for psychiatric hospitalization (HR = 5.24, 95% CI = 4.61-5.96).
- Unfavorable socioeconomic factors, such as living with an oldest family member who had low education (HR = 2.51, 95% CI = 2.16-2.91) or was unemployed (HR = 1.49, 95% CI = 1.36-1.62), living in a crowded household with seven or more family members (HR = 1.84, 95% CI = 1.49-2.26), increased the risk of psychiatric hospitalization.
- Being male (HR = 1.28, 95% CI = 1.21-1.36) was associated with an increased risk of psychiatric hospitalization.

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RESULTS CONTINUED

Table 1. Adjusted hazard ratio and respective 95% confidence intervals of the multilevel multivariate cox regression for all-cause youth psychiatric hospitalization in Brazil, 2011-2018

	Hazard risks (95% CI)
Sex	
Female (Ref.)	...
Male	1.28 [1.21, 1.36]
Interpersonal violence	
No (Ref.)	...
Yes	5.24 [4.61, 5.96]
Race/skin colour/ethnicity	
White (Ref.)	...
Black or Brown	0.96 [0.90, 1.02]
Asian	0.86 [0.57, 1.29]
Indigenous	0.38 [0.21, 0.69]
Household size	
From 2 to 6 people (Ref.)	...
7 people or more	1.84 [1.49, 2.26]
Oldest household member's education	
≥ 12 years of education (Ref.)	...
4 & < 12 years of education	0.98 [0.92, 1.05]
< 4 years of education	2.51 [2.16, 2.91]
Unemployed oldest household member	
No (Ref.)	...
Yes	1.49 [1.36, 1.62]
Household conditions	1.03 [1.00, 1.06]
Location of residence	
Urban (Ref.)	...
Rural	0.76 [0.68, 0.86]
CAPS coverage	1.08 [1.04, 1.13]
Psychiatric beds	1.00 [0.99, 1.00]
Random effects	
Municipal (σ)	0.683
Municipal (σ^2)	0.467
Region (σ)	0.801
Region (σ^2)	0.642
Observations	5317837

CONCLUSIONS

Our findings underscore the interconnections between previous violent victimization, unfavorable socioeconomic conditions and severe psychiatric disorders in a critical stage of life, stressing the need for early interventions. Health officials urgently need to act to safeguard youth from violence. Addressing it may alleviate the mental disorder burden in youth, benefiting individuals, families, and the government by reducing preventable psychiatric hospitalization costs.

ADDITIONAL KEY INFORMATION

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