

STASH, Vol. 5(7) - Schizophrenia and substance abuse: The risk for violence

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Research indicates that people diagnosed with schizophrenia are at an increased risk of committing a violent act compared to those who do not suffer from this mental disorder (Joyal, Dubreucq, Grendon, & Millaud, 2007). What remains uncertain is the degree to which schizophrenic people are at risk for violence (Mullen, Burgess, Wallace, Palmer, & Ruschena, 2000; Rasanen et al., 1998; Steadman et al., 1998). This week's STASH reviews a longitudinal study that examined how substance abuse affects risk for violent behavior among people with schizophrenia (Fazel, Langstrom, Hjern, Grann, & Lichtenstein, 2009).

Methods

Study Groups

- 8,003 people from the nationwide Swedish registries (1973 through 2006) diagnosed with schizophrenia on at least two separate occasions (to minimize false-positive diagnoses) and who were at least 15 years old at baseline.
- Two control groups: 1) for each schizophrenic, a matched (by year of birth and gender) random selection of 10 members from the general population (n = 80,025); 2) the unaffected siblings of the 4,674 schizophrenics who had unaffected siblings (n = 7,780).

Data

- Data obtained from nationwide Swedish registries (1973 through 2006) included sociodemographic information, hospital admissions, substance abuse (i.e., diagnosis of alcohol abuse/dependence and drug abuse/dependence at hospital admission), and violent crime (e.g., homicide, sexual offense (e.g., rape, child molestation), illegal threats, and intimidation).

Statistical Analysis

- The researchers used conditional logistic regression analyses to estimate risk for violence related to substance use among patients compared to the two control groups.

Results

- Among the schizophrenics, substance abuse significantly exacerbated the risk for violence from 8.5% to 27.6%.
- Schizophrenics with substance abuse comorbidity were at a significantly higher risk for violence than the matched general population controls: 27.6% compared to 6.1%, respectively.
- Schizophrenics with substance abuse comorbidity also were more likely to commit a violent crime compared to their unaffected siblings: 28.3% compared to 17.9%, respectively.
- Table 1 displays the adjusted odds ratios of committing at least one violent crime to show that compared to the general population, but not unaffected siblings, the risk of violence by schizophrenics with substance abuse was much more than the risk of violence by schizophrenics without substance abuse.

Control Groups	Adjusted Odds Ratio (95% CI)*	
	Patients <i>without</i> Comorbid Substance Abuse	Patients <i>with</i> Comorbid Substance Abuse
Unaffected General Population Controls	1.2 (1.1-1.4)	4.4 (3.9-5.0)
Unaffected Sibling Controls	1.3 (1.0-1.4)	1.8 (1.4-2.4)

Figure. Adjusted Odds Ratios of Violent Crime among Schizophrenic Patients and the Controls with and without Comorbid Substance Abuse (adapted from Fazel et al., 2009).* The comparison between patients and matched public population control group was adjusted by income (lowest vs. middle and highest tertiles), marital status (single vs. not single) and immigration status (individual or at least 1 parent born outside of Sweden). The sibling group was not matched but the comparisons were adjusted by year of birth, sex, income, and marital status. Click image to enlarge.

Limitations

- This sample came from Swedish data and therefore, the results may not generalize to all populations.
- The study relied on hospital data to determine schizophrenia diagnosis

and comorbid substance abuse. Because two schizophrenic diagnoses were needed for participant inclusion, some schizophrenic patients might not have been included. The diagnostic validity of substance abuse diagnoses from the Swedish Hospital Discharge Registry has been shown to be in fair agreement with more comprehensive inpatient assessments (Bergman, Belfrage, & Grann, 1999). However, many instances of substance abuse do not result in hospitalizations.

- The researchers did not have data available regarding any type of treatment that participants received. Treatment that includes the use of antipsychotic drugs has been shown to reduce the risk of violence among people with schizophrenia (Swanson et al., 2008).

Conclusion

This study shows that substance abuse is a potential moderator for violent behavior among people with schizophrenia. However, the data also suggests the importance of considering family-related factors because the difference between comorbid schizophrenics and their unaffected siblings is small compared to the difference for the general population control group. More research is needed to examine why schizophrenia and substance abuse comorbidity are related to a higher risk of violent behavior.

What do you think? Please use the comment link below to provide feedback on this article.

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