

Sociodemographic and clinical risk factors for suicidal ideation and suicide attempt in functional/dissociative seizures (FDS) and epilepsy: a large cohort study

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BACKGROUND

Suicide is the **second most common cause of death** worldwide.¹ People with **functional/dissociative seizures (FDS)** and people with **epilepsy** are at elevated risk of suicide.^{2,3} Identifying **risk factors** for suicidal ideation and suicide attempt in these high-risk groups is essential to inform risk prevention strategies.

AIM

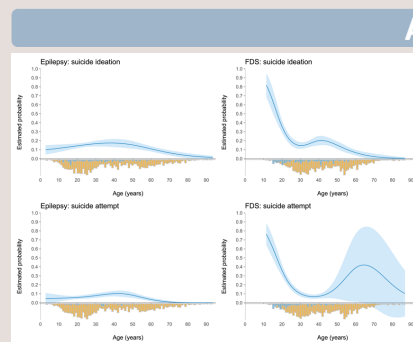
To identify **risk factors** for first episodes of **suicidal ideation and suicide attempt** in people with **functional/dissociative seizures (FDS)**.

METHODS

- Retrospective cohort study from the UK largest tertiary mental health care provider, with linked nation-wide admission data from the Hospital Episode Statistics (HES).
- Participants were **2383 people** with a diagnosis of FDS or epilepsy (FDS n = 1040; Epilepsy n = 1343).
- Outcome variables were a **first hospital admission for suicide attempt** (ICD-10 X60-X84) and a **first mention of suicidal ideation** in clinical notes (extracted with Natural Language Processing).⁴
- **Risk factors** examined were age, gender, ethnicity, Depression/Bipolar, Anxiety/Stress-related Disorders, Substance Misuse Disorder, Personality Disorder, Pervasive Developmental Disorder/ID
- Multivariable bias-reduced binomial-response GLM

RESULTS

➤ Suicidality in people with FDS - Risk factors identified:



Age

Younger people were at higher risk of suicidal ideation (OR: 0.85; CI: 0.81–0.90; $p < 0.001$) and suicide attempt-related hospitalization (OR: 0.81; CI: 0.77–0.86; $p < 0.001$). Age was the strongest risk factor (9–16% variance explained).

Fig. 1 Loess smoothed (local non-linear regression) curves showing probability of suicidal ideation and suicide attempt-related hospitalisation by age for each diagnostic group

Gender

Males and females with FDS were at comparable odds of reporting suicidal ideation and being hospitalized due to suicide attempt (OR: 1.28; CI: 0.87–1.88; $p = 0.21$).

Ethnicity

Ethnic minorities were half as likely to receive medical attention following suicide attempts as compared to people of white ethnicity (OR: 0.49; CI: 0.26–0.92; $p = 0.02$).

Personality Disorder

People with a comorbid diagnosis of Personality Disorder were at 200% higher risk of experiencing suicidal ideation (OR: 3.01; CI: 1.37–6.63; $p < 0.01$). (3% variance explained)

Depression/Bipolar

People with a comorbid diagnosis of Depression or Bipolar Disorder were at 91% higher risk of experiencing suicidal ideation (OR: 1.91; CI: 1.22–3.00; $p < 0.01$). (3% variance explained)

The variance explained by the risk factors studied is relatively low. Validation on an independent sample is recommended. Factors beyond those examined in this study are likely to also influence the risk of suicidality in FDS.

DISCUSSION

Ethnicity has similar relationships with suicidality in both FDS and epilepsy groups, indicating that this is more likely to be a general risk factor, rather than specific to a particular clinical population.

A pattern of association that was unique to FDS was found for **gender, age, and comorbidity profile** (see results).

Whilst correlates of suicidality such as disorder-specific comorbidity profiles will be useful to identify groups at higher risk in clinical settings, factors such as ethnicity are suitable targets for population-based health strategies and preventive programs.

CONCLUSION

This is the first study to systematically examine risk factors for suicidality in people with FDS. Disorder-specific risk factors have been identified.

PAPER IN PRESS

Faiman, I., Hodsoll, J., Jasani, I., Young, A. H., Shotbolt, P. (in press). Sociodemographic and clinical risk factors for suicidal ideation and suicide attempt in functional/dissociative seizures and epilepsy: a large cohort study. *BMJ Mental Health*.

FUNDING

This work was supported by the Bergqvist Charitable Trust through the Psychiatry Research Trust as a PhD scholarship to Irene Faiman. This study represents independent research partly funded by the National Institute for Health Research (NIHR) Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London (KCL). Professor Young's independent research is funded by the National Institute for Health Research (NIHR) Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London.

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