

Is epilepsy a risk factor for developing psychiatric disorders in adults with intellectual disabilities? A systematic review and meta-analysis

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Background

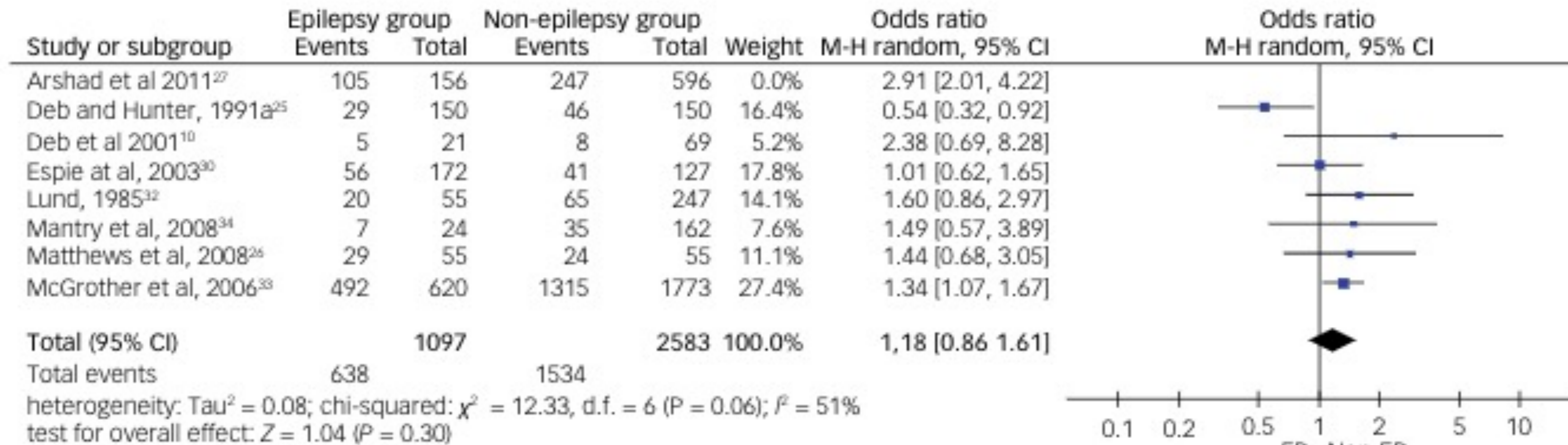
Psychiatric disorders such as depression and anxiety are commonly associated with epilepsy in the general population but the relationship between psychiatric disorders and epilepsy among adults with intellectual disabilities is unclear.

Aims

A systematic review and meta-analysis were carried out to assess whether epilepsy is associated with an increased rate of psychiatric disorders in adults with intellectual disabilities.

Method

Relevant literature published between 1985 and 2020, using EMBASE, PsycINFO, PubMed and DARE databases were included and six relevant journals in the fields of intellectual disabilities and epilepsy were hand searched. The Cochrane Risk of Bias assessment tool and Scottish Intercollegiate Guideline Network (SIGN) 50 criteria were used to assess the quality of the included papers. A number of meta-analyses were also carried out.



Forest plot of seven studies on overall psychiatric disorders (Arshad et al study was excluded from meta-analysis after sensitivity analysis)

Results

Twenty-nine papers were included in our systematic review that presented data overall on 9,594 adults with intellectual disabilities, 3,180 of whom had epilepsy and 6,414 did not. Of the 11 controlled studies that compared the overall rate of psychiatric disorders between epilepsy and the non-epilepsy group, seven did not show any significant intergroup difference. Meta-analysis was possible on pooled data from seven controlled studies which did not show any significant intergroup difference in the overall rate of psychiatric disorders. The rates of psychotic disorders, depressive disorders and anxiety disorders were significantly higher in the non-epilepsy control groups compared with the epilepsy group with effect sizes of 0.29, 0.47, 0.58 respectively. Epilepsy related factors such as the types of epilepsy syndrome and seizure, frequency, EEG abnormalities, medication related factors such as polypharmacy or antiepileptic types did not show any definite association with psychiatric disorders.

Conclusions

It is difficult to pool data from such heterogeneous studies and draw any definitive conclusion as most studies lacked an appropriately matched control group which will be required in future studies.