

Is epilepsy a risk factor for behaviours that challenge in adults with intellectual disabilities? A systematic review and meta-analysis

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Background

Both epilepsy (c.24%) and behaviours that challenge (BtC) (24-60%) are common in adults with intellectual disabilities (ID). However, the relationship between epilepsy and BtC, particularly in the inter-ictal phase in adults with ID is not clear.

Aims

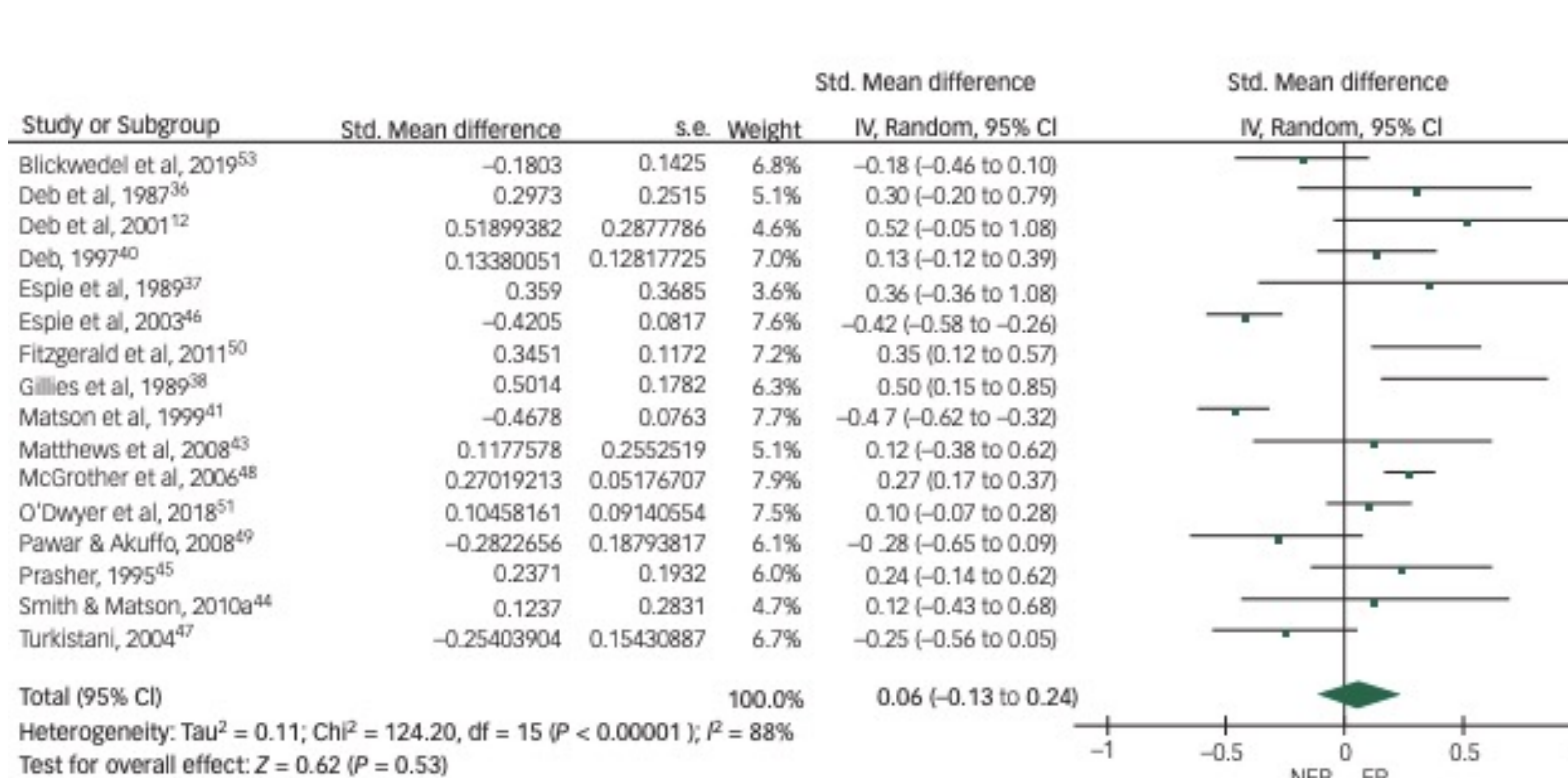
We have carried out a systematic review and meta-analysis of the published data using a random effects model to identify whether there is an association between epilepsy and BtC among adults with ID as previous systematic reviews failed to show any such association.

Methods

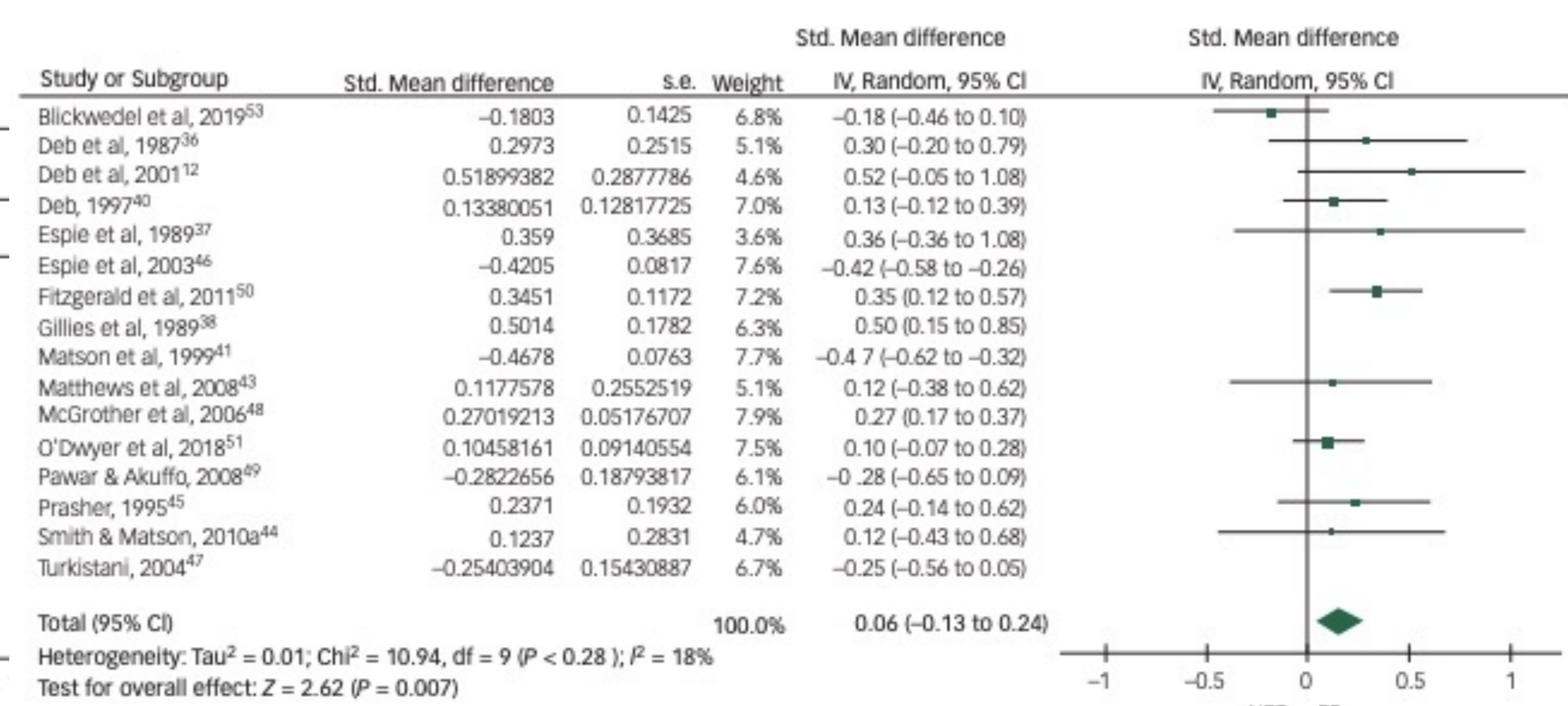
Embase, PubMed/MEDLINE, PsycINFO, DARE and ASSIA (ProQuest) databases were searched. We also hand searched six relevant journals in the fields of ID and epilepsy. All selected titles, abstracts and full articles were screened independently by two authors using standardised eligibility criteria for selection derived from Cochrane handbook. Several meta-analyses were carried out.

Results

The narrative analysis of data from 34 included articles involving overall 14,168 adults with ID of whom 4781 had epilepsy showed overall no significant association between epilepsy and BtC. Only 19 studies used a control group (only nine were matched). Data from only 16 controlled studies could be pooled for meta-analysis. This showed no significant intergroup difference but after sensitivity analysis meta-analysis of 10 studies showed a significantly higher rate of overall BtC in the epilepsy group (effect size: 0.16) when compared with the non-epilepsy group. Aggression and self-injurious behaviour both showed a statistically significant higher rate in the epilepsy group with very small effect sizes (0.16 and 0.28 respectively). No significant intergroup difference was observed in the rate of stereotypy.



Forest plot of total behaviours that challenge score data from 16 studies



Forest plot of total behaviours that challenge score data from 10 studies after sensitivity analysis

Conclusions

The findings are contradictory and have to be interpreted with caution because of the difficulty in pooling data from very varied studies which is likely to introduce confounding, and where significant the effect sizes are small and may not be clinically significant.