Does parental self-efficacy impact weekly reported mental health outcomes for children with epilepsy who have received a programme of cognitive behavioural therapy (MATCH-ADTC)?

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BACKGROUND

- Epilepsy is associated with high rates of mental health disorders; up to half of Children and Young People (CYP) with epilepsy have mental health problems [1,2].
- The Modular Approach to Children with Anxiety, Depression, Trauma and Conduct Problems (MATCH-ADTC) is a treatment plan supporting those with multiple presenting mental health difficulties [3] and has been adapted to include epilepsy-specific support [4]. Evidence shows it is effective in improving mental health outcomes of CYP with epilepsy [5].
- Data suggests that having a child with epilepsy negatively impacts parental mental health [6]-[8]. However, some studies suggest this is not the case [9].
- Increased feelings of parental self-efficacy (*parents' belief that they can effectively perform or manage tasks related to parenting*) have been correlated with parental quality of life in other chronic childhood illnesses such as asthma [10].
- There are hgh levels of comorbidity between Autism Spectrum Disorder (ASD) and epilepsy; estimated 9% [11]. Data also suggests ASD impacts parental self-efficacy,this is related to mental health outcomes of children [12],[13].

OBJECTIVES

Change • Determine how parental self-efficacy and child mental health change during a course of MATCH-ADTC

Relationship • Ascertain relationship between parental self-efficacy and child mental health

Confounders • Establish whether potential confounders, such as ASDs impact a child with epilepsy's mental health outcomes or parental efficacy

METHODS

Variables:

BPSES* (self-reported, parent) 5 ⟷ 25

SDQ** Impact (self-reported, parent) 0 ⟷ 10 (low 3 very high)

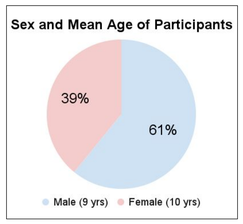
Statistical Analyses:

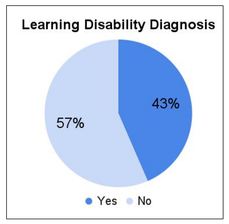
- Descriptive statistics (T-test, Chi-squared test)
- Simple linear regression (beta coefficient, 95% confidence intervals)
- Multivariable linear regression (confounders: age, sex, comorbidity)

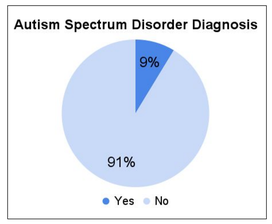
*Brief Parental Self-Efficacy Score; **Strengths and Difficulties Questionnaire

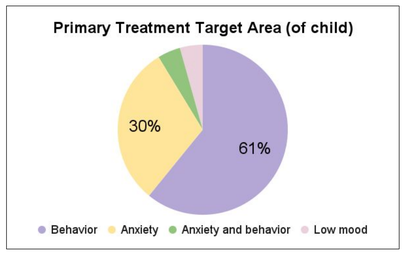
RESULTS

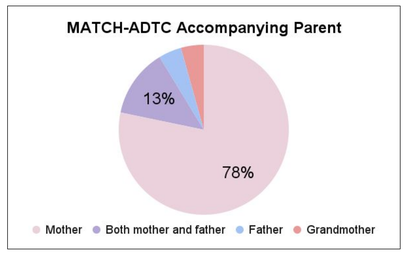
Patient Demographics









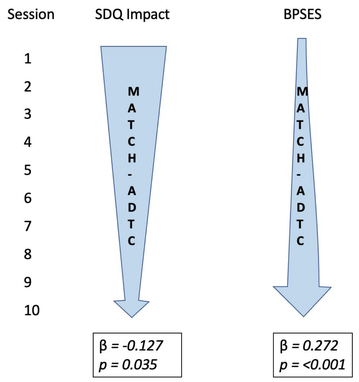


In addition to this:

- The mean BPSES score at baseline was 19 (out of 25)
- The mean SDQ impact score at baseline was 4 (out of 10; "very high")
- 14 children (61%) had an SDQ Impact score "above threshold" at baseline
- No significant correlation between baseline characteristics and SDQ Impact "above threshold" vs "below threshold" scores
- "Below threshold" SDQ scores correlated with higher BPSES at baseline (20.2 in "above threshold" compared to 18.6 in "below threshold") (p = 0.25)
- Two children diagnosed with ASD both had "above threshold" SDQ impact (p = 0.24)

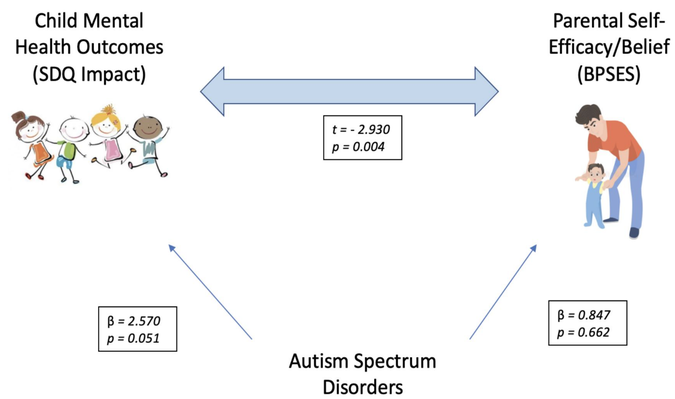
Relationship between BPSES and SDQ

Across 10 session of MATCH-ADTC, each increase in session number resulted in a 0.28 increase in average BPSES (p = <0.001) and a 0.13 decrease in SDQ-Impact (p = 0.035)



No significant results were found when analysing the effect of each unit increase in BPSES on SDQ Impact score, however it was found that when adjusting for Learning Disability (LD) and ASD, beta coefficient was reduced by 122% and 55% respectively.

Sessions with a "below threshold" SDQ Impact value had significant increased total BPSES score (t = -0.293; p = 0.004). This relationship remained the same for ⅝ of the individual BPSES questions.



When adjusting for LD and ASD, results for LD were insignificant both for SDQ and BPSES difference. However, our analysis showed that a marked decline in mental health outcomes was observed for CYP with epilepsy and comorbid ASD (β = 2.57; p = 0.051).

STRENGTHS AND LIMITATIONS

✅ To our knowledge, this is the first study to specifically address parental self-efficacy for children with epilepsy

✅ To our knowledge, this is the first study to identify marked differences in the mental health outcomes of children with epilepsy and comorbid Autism Spectrum Disorder

✅ BPSES and SDQ Impact scores averaged scores across sessions; increase reliability

❌ Small sample size, particularly of CYP with comorbid ASD

❌ BPSES and SDQ Impact scores self-reported by the parent; information bias

❌ Unmeasured confounders (socioeconomic status, epilepsy severity/onset)

❌ Unable to determine a temporal relationship between increased feelings of parental self-efficacy and improved child mental health outcomes

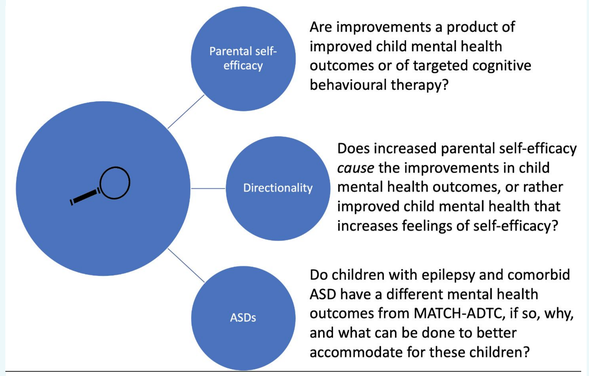
CONCLUSIONS

MATCH-ADTC • Positively impacts both parental self-efficacy and child mental health outcomes

Correlation • Significant correlation between parental self-efficacy and child mental health outcome

ASD • This relationship may not be the same for children with comorbid ASD, who showed a marked decline in mental health outcomes throughout MATCH-ADTC in our analysis *(keeping in mind small sample size of children with ASD)*

RESEARCH/CLINICAL IMPLICATIONS



Our research indicates the importance of supporting parents of children with epilepsy, and future treatments should ensure the needs of parents are adequately supported.

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Abbreviations ASD = Autism Spectrum Disorder; BPSES = Brief Parental Self-Efficacy Score; CYP = Children and Young People; MATCH-ADTC = Module Approach to Treatment of Children with Anxiety, Depression, Trauma or Conduct Problems; SDQ = Strengths and Difficulties Questionnaire