

The role of language in mental health during the transition to secondary education

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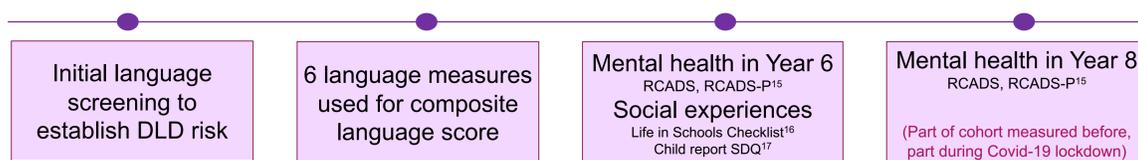
Background

- Transition to secondary education is a time of particular vulnerability to difficulties with mental health, especially for those with language disorders (LD)^{1,2} such as DLD³, likely connected to genetic correlations between internalizing symptoms and LD⁴, and increased risk of emotional, behavioural and attentional-deficit/hyperactivity problems⁵
- Social difficulties and poorer friendship quality in children with LD⁶, exacerbated by increased risk of bullying⁵, may contribute to poor mental health outcomes^{7,8} through the large significance of social relationships and popularity for adolescent mental health⁹
- On the other hand, prosocial behaviour has been suggested as a possible protective factor against social issues and therefore poor mental health outcomes for children with LD¹⁰

Methods

Our study was a preregistered analysis (<https://osf.io/yg2wf>) of data obtained from SCALES¹⁴ – a longitudinal cohort study of children’s language and communication skills.

529 child participants (F=279/M=250) were tested at 5 time points – in Years 1, 2, 4, 6 and 8 and completed assessments including:



Analyses

Linear Mixed Effects modelling was used to investigate if language in Year 1 (T2) predicts anxiety and depression symptoms before (T4) and after (T5) transition to secondary school. Structural Equation Modelling was used to assess if the effect of language is mediated by positive and negative social experiences.

SEM mediation model

- In child-reported data, language was not associated with mental health outcomes, making it impossible to test mediation.
- In parent-reported data, children’s Year 1 language predicted depression and anxiety in Year 8 as well as positive social experiences in Year 6. However, there were no mediation effects.

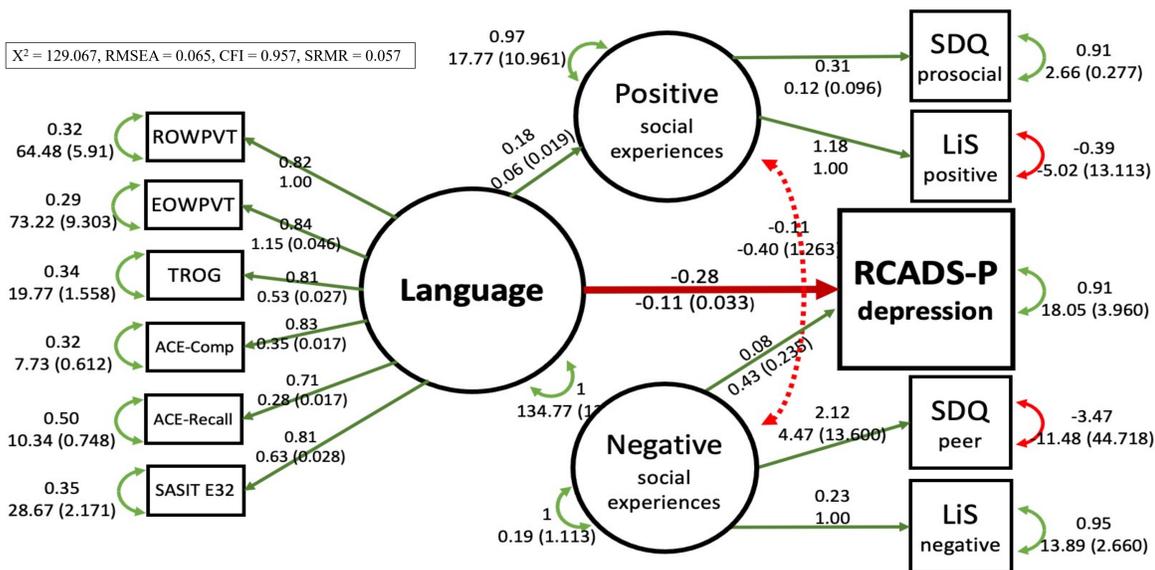


Fig 2. SEM mediation model for parent-reported depression

Effects of Covid-19 lockdown

- The 5th assessment time point was interrupted by the Covid-19 pandemic, leading to part of the cohort being tested before lockdown, and part during.
- As an exploratory cross-sectional analysis, we compared mental health between children seen before and during the lockdown and found no significant effects on mental health
- Contrary to our hypotheses and prior findings¹¹⁻¹³, children tested during lockdown reported fewer symptoms, both in child and parent report
- This may be attributable to meaningful differences between the groups (e.g. significantly higher SES [$t(76)=3.01, p=0.004$] and language [$t(81)=5.03, p=0$] in the group tested during lockdown; fewer children with LD responding during lockdown), or perhaps to a decrease in exposure to bullying and other school-related stressors.

Mental health between Year 6 and Year 8

- Although a trend for higher symptoms was observed, LME modelling showed no significant increase in anxiety and depression symptoms between Year 6 and Year 8.
- In child-reported data, there was no difference in symptoms over time and no effect of Year 1 language.
- In parent-reported data, children with language difficulties had significantly more mental health symptoms than typical children at both timepoints, but not a higher rate of change. Year 1 language predicted depression and anxiety levels in Year 6 and 8, but not the change across time.

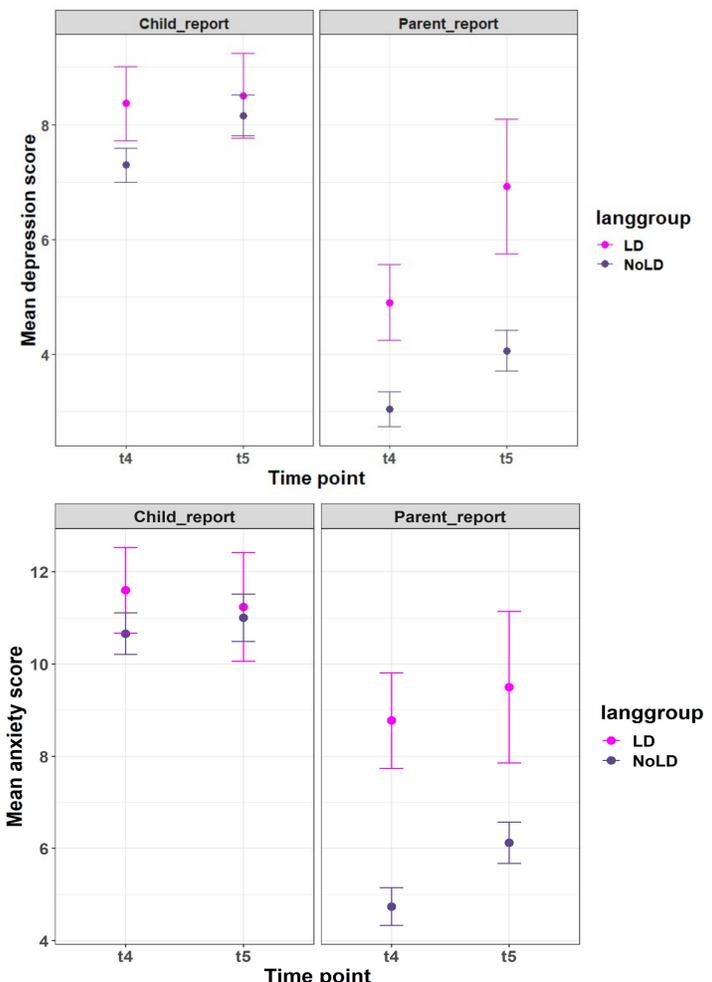


Fig 1. Mean depression and anxiety scores in Year 6 and 8 split by language group, parent and child report

Child-parent agreement

- Correlations between child- and parent-reported scores were low to moderate ($r = 0.24-0.41$).
- Children consistently reported higher levels of symptoms than their parents, as previously observed in other studies utilising child and parent report.¹⁴

Conclusions

- We did not find evidence for an increase in depression and anxiety symptoms between primary and secondary school.
- Child-reported data did not reveal effects of Year 1 language on mental health in adolescence.
- In parent-reported data, poorer language predicted higher levels of symptoms in both Year 6 and 8, suggesting a higher mental health burden for children with language disorders compared to typically-developing peers.
- This was not mediated by negative or positive social experiences.

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