

How impulsivity impacts Vyvanse efficacy in Binge Eating Disorder

Griffiths, K.¹, Aparicio, L.¹, Braund, T.¹, Yang, J.¹, Harvie, G.¹, Harris, A.^{1,2}, Hay, P.³, Touyz, S.⁴ Kohn, M. ^{1,5,6},

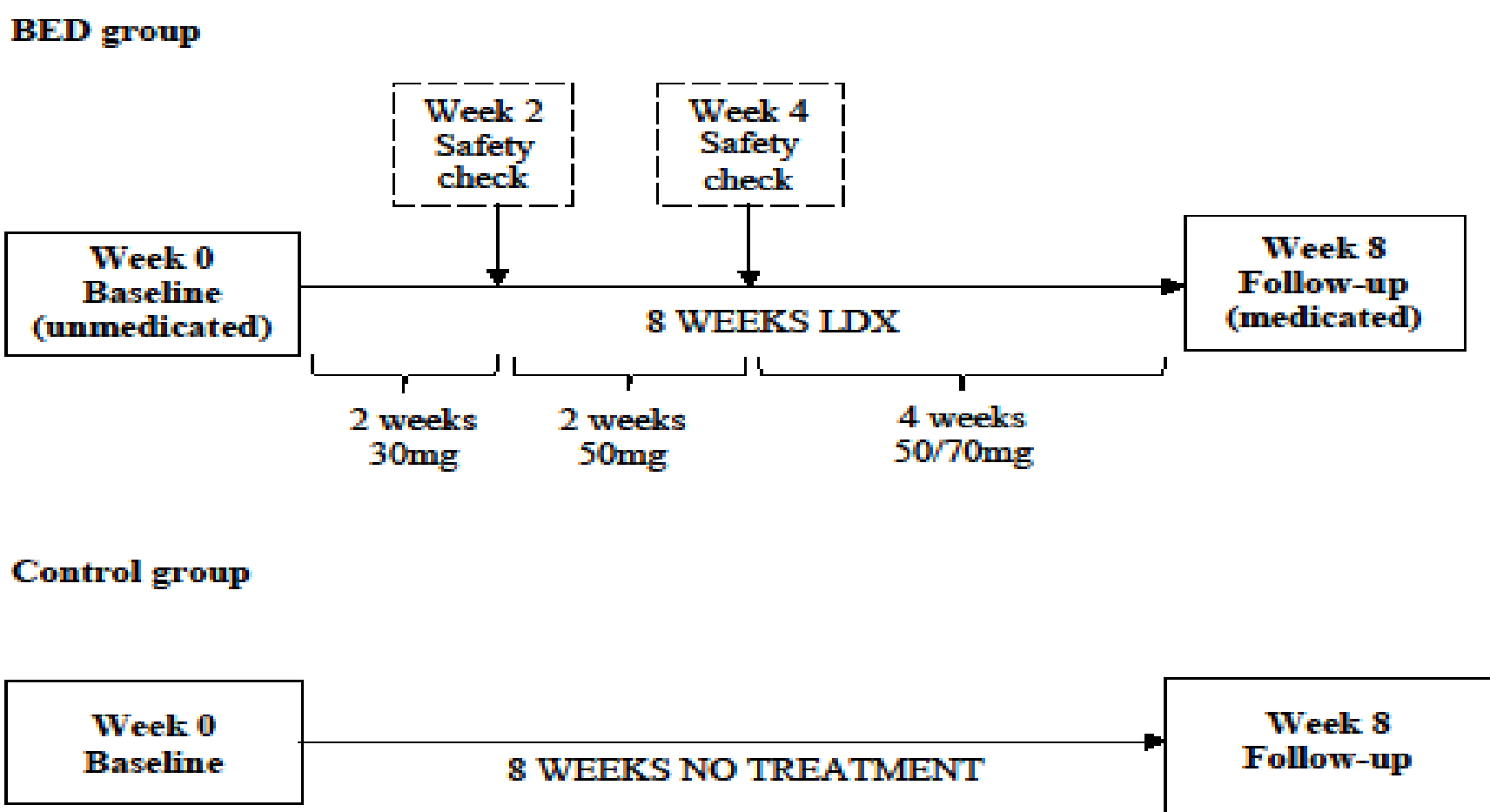
¹Brain Dynamics Centre, Westmead Institute for Medical Research, Westmead, ² Discipline of Psychiatry, FMH, University of Sydney, ³Translational Health Research Institute, SoM, Western Sydney University, ⁴Clinical Psychology Unit, University of Sydney, ⁵AYA Medicine, Westmead Hospital, ⁶Centre for Research into Adolescents Health, Westmead

Background & Objectives

High trait impulsivity is thought to contribute to the sense of loss of control over eating and impulses to binge eat experienced by those with Binge Eating Disorder (BED). Lisdexamfetamine Dimesylate (LDX)(Vyvanse), a drug approved for treatment of moderate to severe BED, has been shown to decrease impulsive features of BED. However, the relationship between Vyvanse-related reductions of binge eating (BE) episodes and impulsivity has not yet been explored.

Methods

- Forty-one adults aged 18-40 years with moderate to severe BED completed questionnaires and tasks assessing impulsivity at baseline and after 8 weeks of 50-70mg of LDX.
- Twenty age-matched healthy controls were also assessed at 2 timepoints for normative comparison.
- Assessments included weekly binge eating frequency, Monetary Incentive Delay Task, cued GoNoGo, Barratt Impulsiveness Scale and Brief Loss of Control Over Eating Scale
- Linear mixed models used to interrogate how impulsivity is affected in BED and how it influenced and is effected by Vyvanse



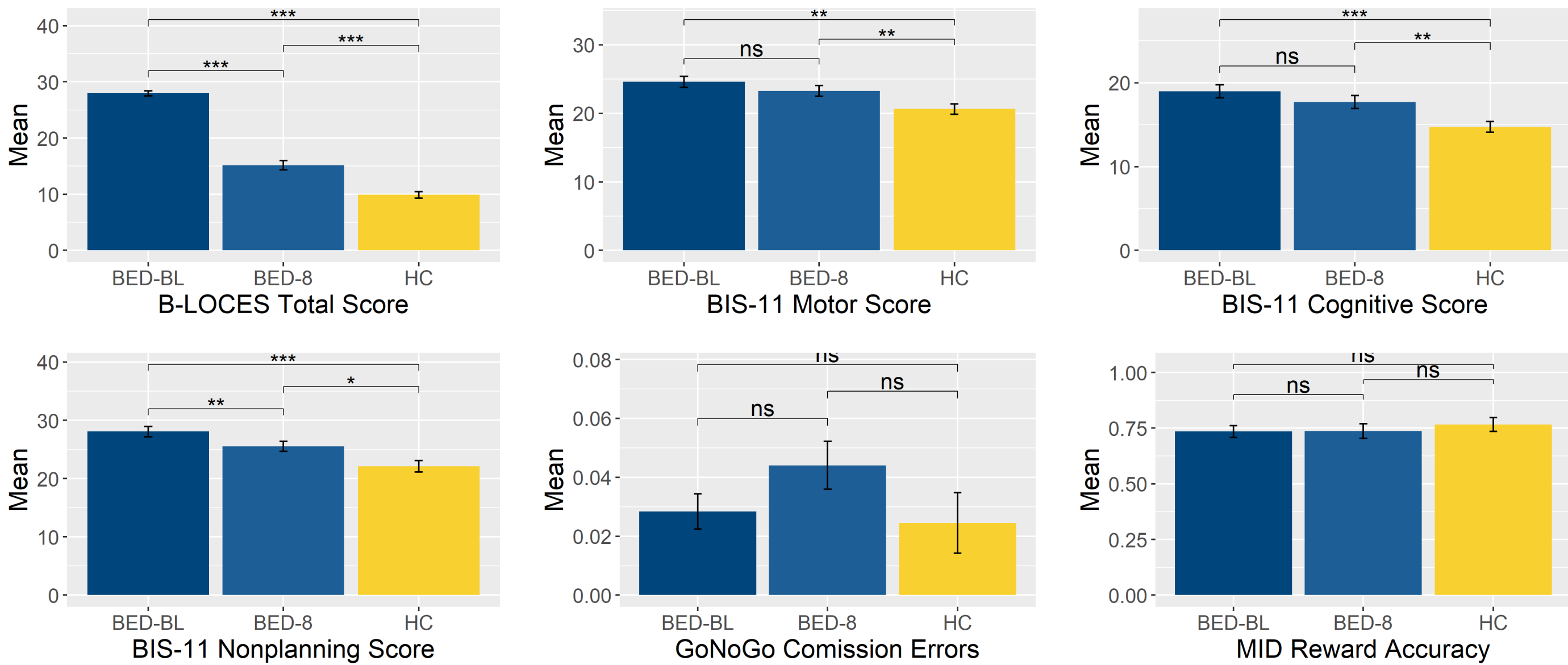
Participant Characteristics

	BED BL (n=41)	HC (n=20)	BED medicated (n=33)
Age (mean, SD)	26.6 ± 5.5	27.5 ± 5.7	
Sex n (%)	40 (97.6)	19 (95)	
Body Mass Index	27.80 ± 5.46	24.10 ± 4.14	26.30 ± 4.59
Binge Eating Frequency/wk	4.17 ± 1.22		1.26 ± 1.01

- At week 8, 20 BED participants were taking 50mg of LDX, 13 were taking 70mg.
- 14 HC returned for 8 week follow up assessment

1. Do individuals with BED have higher levels of impulsivity relative to HC?

Yes, on all self-report impulsivity measures, but not on task-based impulsivity measures



* p = 0.05, ** p = 0.001, *** p < 0.001

2. Does LDX normalize any aberrant measures of impulsivity for individuals with BED?

The BED group reported reductions in BIS-11 non-planning and B-LOCES score, however both these measures remained elevated relative to HC.

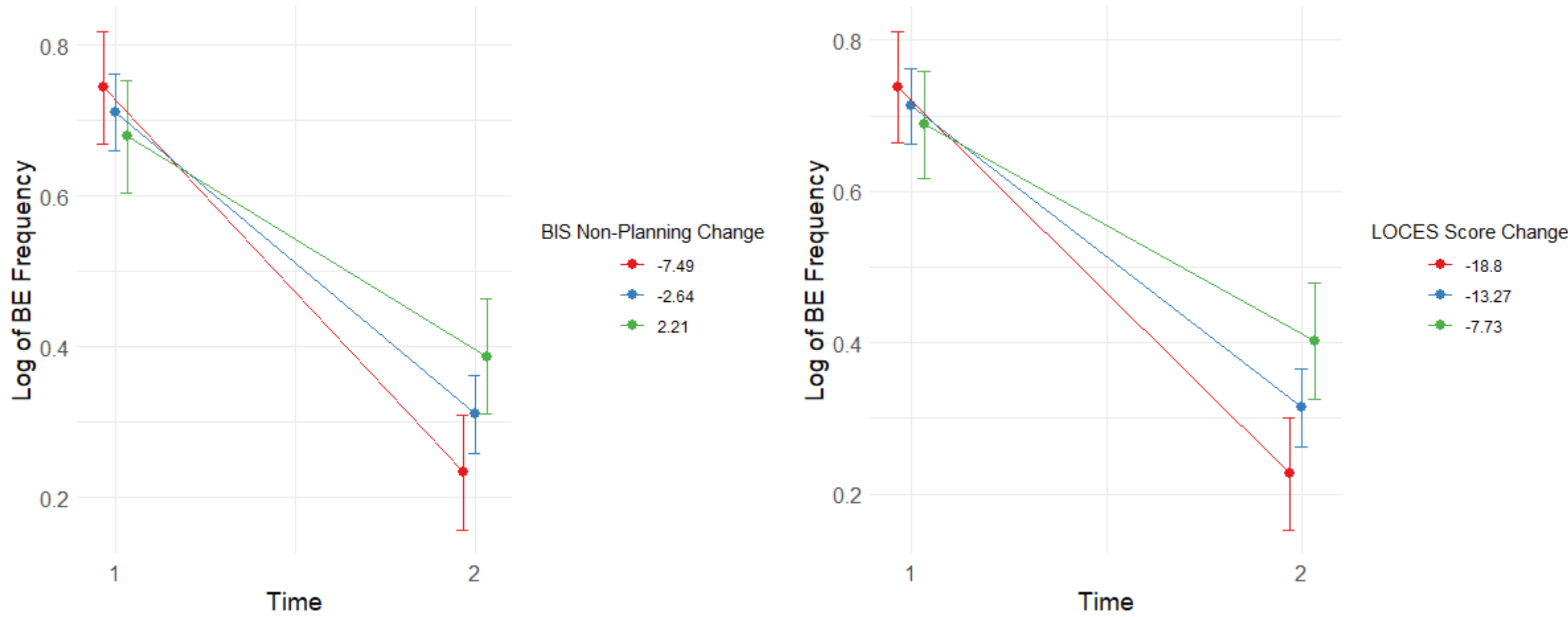
There were no significant LDX-related changes in BIS-11 motor or cognitive scores relative to baseline, and these measures remained elevated relative to HC.

Acknowledgements

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For more information, please email kristi.griffiths@sydney.edu.au

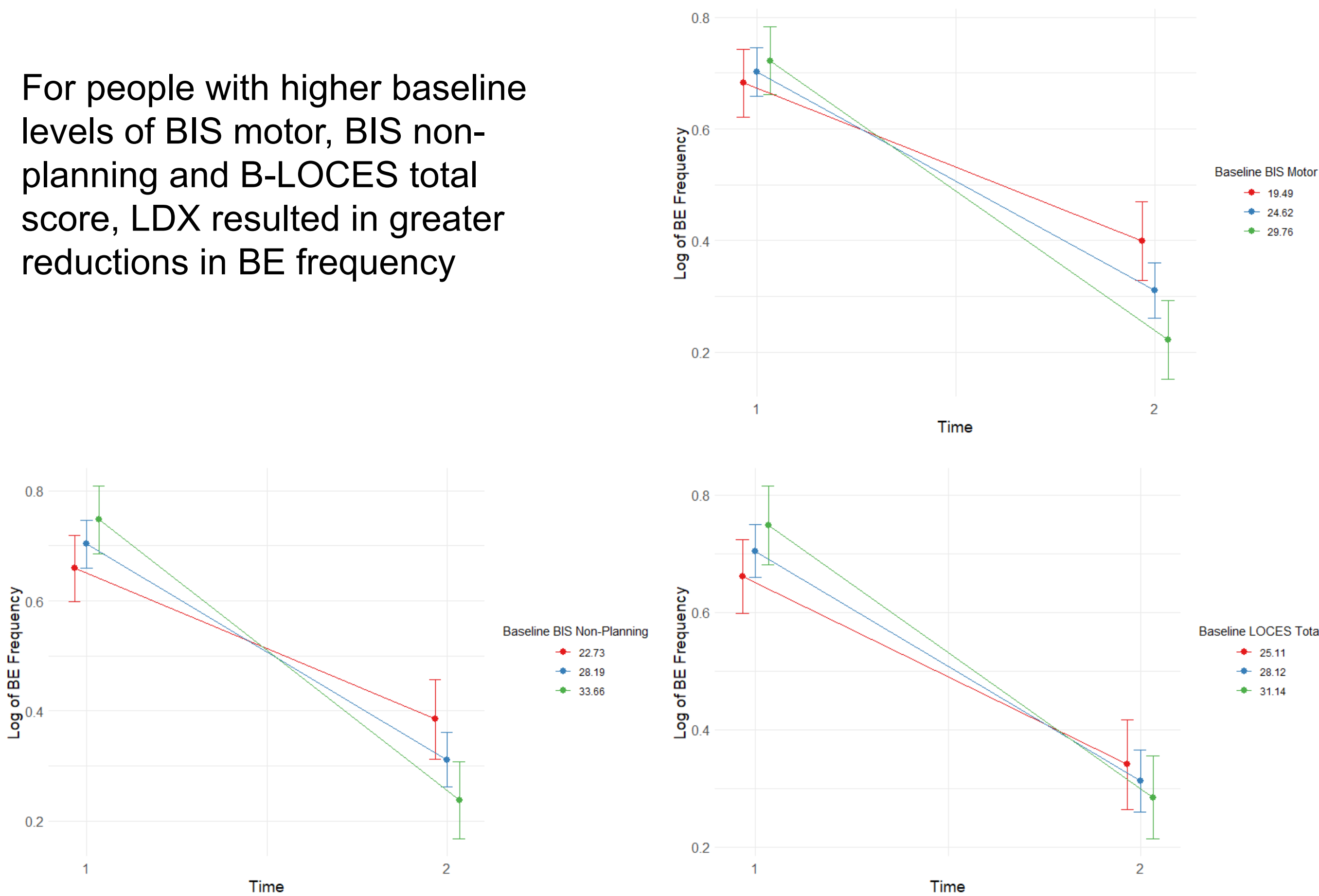
3. Are Vyvanse-related changes in BE frequency associated with concurrent changes in impulsivity measures?

There were significant interactions between change in log BE frequency and change in BIS non-planning and change in B-LOCES.



4. Do baseline impulsivity levels impact the degree to which Vyvanse reduces binge eating frequency?

For people with higher baseline levels of BIS motor, BIS non-planning and B-LOCES total score, LDX resulted in greater reductions in BE frequency



Summary & Conclusions

- Beyond food-specific impulsivity, Vyvanse is also effective at reducing some general aspects of impulsivity in BED.
- Individuals with higher baseline levels of motor and nonplanning impulsivity, and loss of control over eating scores may experienced the greatest efficacy from Vyvanse treatment