

ADHD Traits, Self-Control Strategy Effort, and Depressive Symptoms

Short Report for Health Spotlight Small Grant

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1 Overview

This grant supported the data collection and analysis for *ADHD Traits, Self-Control Strategy Effort, and Depressive Symptoms*, part of a wider programme on how everyday self-regulation relates to mental health. In a UK community adult sample recruited through Prolific, the study asked whether adults with more attention-deficit traits report more depressive symptoms, whether they experience self-control as more effortful, and whether that effort helps explain the link to depression. The analysis plan was preregistered on the Open Science Framework before any data were examined. The funded data collection is now complete: 554 valid participants were recruited, and the full preregistered analysis has been run.

2 Use of funds

The award funded participant reimbursement for online data collection through Prolific, paid at £14.57 per hour, a rate above the platform’s “fair pay” threshold, so that participants were compensated fairly for their time. Recruitment was restricted to UK adults aged 18–30 with a strong platform track record (approval rate above 95%, at least 100 prior submissions) to protect data quality.

The full award of £2,000 was spent through Prolific on data collection, covering participant reimbursement together with the platform’s service fee and VAT. This funded a pilot of 35 participants, run before the main launch to check the questionnaire’s timing, flow, and comprehension and confirm that the instrument worked as intended, followed by the main round, in which the questionnaire took a median of 9.3 minutes and reimbursement was paid to every approved submission. The analysed sample of 554 is smaller than the number reimbursed because preregistered data-quality screening removed incomplete records *after* payment.

None of the award was spent on equipment, staff time, or overheads: every pound went to participant reimbursement and the associated platform and tax charges.

3 Results

ADHD traits are strongly linked to depressive symptoms. Adults reporting more ADHD traits reported substantially more depressive symptoms, and by the conventions of the literature, the association was large ($r = .59$, $p < .001$): a one standard-deviation rise in ADHD traits corresponded to a 0.40-point rise on the depression scale, which runs from 1 to 4. The

link held after accounting for age, gender, and attributional style. Depressive symptoms were also common in this general sample, with roughly two-thirds of participants scoring at or above the scale midpoint, so the burden is not confined to a diagnosed minority. Because participants were community adults rather than a clinical group, the association runs across the ordinary range of these traits. This is consistent with the elevated depression risk found in clinical ADHD populations (Thapar et al., 2023), but it extends the pattern into the subclinical range where most affected people sit.

Self-control feels effortful for these adults, across strategy types. Higher ADHD traits went with rating self-control strategies as more effortful, both the “in-the-moment” regulatory kind (mean 5.1 on a 1–7 scale) and the “planning-ahead” kind (mean 4.8), and to an equal degree (both $r = .16$, $p < .001$). We had predicted that the in-the-moment strategies would feel more effortful; they did not, and a formal test found the two indistinguishable. The sense of strain was general rather than specific to one type of strategy.

Effort alone did not explain the depression link, but how often strategies are used may. Perceived effort did not amplify the ADHD–depression association, whether each strategy type was tested on its own or both were entered together. A clearer pattern appeared for frequency of use: adults with more ADHD traits reported using in-the-moment strategies less often ($r = -0.14$), and less frequent use was in turn associated with more depressive symptoms ($r = -0.17$). Strategies that feel harder to use and are used less often are the ones most likely to leave difficulties unmanaged, which makes frequency a more promising route to the depression link than perceived effort. These frequency results are exploratory and reported without a confirmatory claim, but they shape the next stage of the programme.

How people explain setbacks also matters. Independently of ADHD traits, a more internal, stable, and global attributional style, meaning a tendency to read setbacks as one’s own lasting and wide-reaching fault, was associated with more depressive symptoms (stability $r = .31$, globality $r = .28$, both $p < .001$). This fits earlier work treating attributional style as a vulnerability factor for depression. The measure was less reliable in our sample than the others, so we treat this result as indicative rather than firm.

Figure 1 shows the correlations among all the main study variables.

4 How this study supports well-being

Depression is one of the largest contributors to the global burden of poor well-being, and adults with elevated ADHD traits face a heightened but often unnoticed risk. This study bears on that risk in three ways.

First, it shows who is affected. The ADHD–depression link held in a general community sample, not a diagnosed clinical group, and across the everyday range of ADHD traits rather than only at clinical thresholds. Many people who struggle with attention and self-regulation never receive a formal diagnosis, but their risk of low mood still rises with their traits. Support that depends on a diagnosis will not reach them, so there is a case for identifying people earlier, on the basis of everyday difficulty.

Second, it says something about the nature of the difficulty. For adults with more ADHD traits, staying on task and resisting distraction feels more effortful, and they report using self-control strategies less often. Self-control that is both harder and less used suggests a target that can actually be changed: reducing the day-to-day regulatory load, for example by helping people structure their environment rather than rely on willpower, instead of only treating low mood after it appears.

Third, because the association is visible across the ordinary range of traits and can be picked

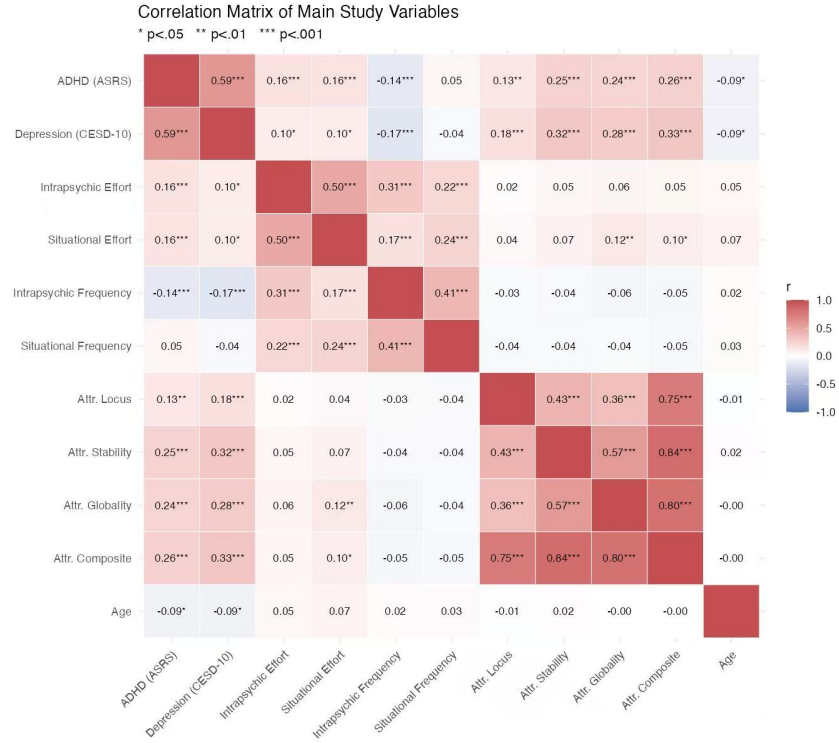


Figure 1: Correlations among the main study variables ($N = 554$). Warmer colours indicate stronger positive correlations, cooler colours negative. * $p < .05$, ** $p < .01$, *** $p < .001$.

up with a short questionnaire, the findings can help identify who might benefit from early, low-intensity support before problems deepen. That kind of preventive approach reaches more people at lower cost than clinical treatment after the fact.

5 An interdisciplinary study

The question at the centre of this study sits between fields, and the team was assembled to match. Self-control and goal pursuit, meaning how people use effort to stay on task, are studied most closely in management and behavioural economics. Depression, individual differences, and how people explain their setbacks belong to well-being psychology. The standards for measuring and testing these things rigorously come from behavioural science. Combining them let us treat a mental-health outcome as, at the same time, a question about everyday self-regulation.

This combination is where the study adds something. A clinical account would have looked only at diagnosis and symptoms; a behavioural account would have measured strategy use without connecting it to mental health. Joining the two shows that the strain of everyday self-regulation and the risk of low mood are part of the same picture, which neither perspective on its own would have shown.

6 Rigour and transparency

The preregistration distinguished confirmatory from exploratory tests in advance. Data were cleaned through a fixed, documented sequence (612 raw records to 554 analysed; Table 1), including a preregistered screen for inattentive and too-fast responding. The two central measures were highly reliable (ADHD traits and depression both Cronbach's α above .87). Item-level

missing data were low and handled by multiple imputation, with all results pooled across imputations. The full analysis is scripted and reproducible, and all outputs are retained. One measure, attributional style, had low reliability in this sample; results involving it are reported with that caveat rather than emphasised.

Table 1: Data-quality screening (preregistered sequence).

Stage	Participants
Raw submissions	612
After study-window filter	566
After consent, completion, and commitment checks	565
After withdrawal handling	561
After attention / too-fast-responding screen	554
Analysed sample	554

At 554, the sample is well above the number the study was designed to need, so the central finding rests on a solid base.

References

Thapar, A., Livingston, L. A., Eyre, O., & Riglin, L. (2023). Practitioner review: Attention-deficit hyperactivity disorder and autism spectrum disorder — the importance of depression. *Journal of Child Psychology and Psychiatry*, 64(1), 4–15.