Tracking and Mitigating the Psychological Impact of Lockdown on Y7-13 Pupils

A Comparison of Pre-Lockdown (2018-March 2020) to December 2020) Pupil Steering Bias Data collected by the AS Tracking Programme

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Report key findings

Comparing pre-lockdown (2018-March 2020) with school-return period (Sept- December 20):

- Schools have 33% fewer protective factors for Y7-13 pupil mental health post-lockdown than pre-lockdown. This is having an adverse affect in particular on girls' mental health.
- Y7-13 girls' social-emotional self-regulation has declined by about 24% over the course of the pandemic. It is currently 49% worse than boys, which is now improving.
- School now provides 67% less protective factors for girls in Y12 than for girls in Y7. By contrast, school provides 20% more protective factors for boys in Y12 compared to boys in Y7. By Y12, girls are more than 130% more at risk socially-emotionally in school than boys.
- 81% of all risks for girls are now internalising, compared to just 7% which are externalising. 8/10 girls now hide and deflect their concerns in the context of school, making detection a challenge.
- Girls are continuing to seek CONTROL on their backstage as a way of coping with the pandemic. The previously observed rise of 40% increase in girls exhibiting Internalised Control has been sustained in the November-December. Previous rises in boys shown some recent signs of improvement.
- Over time Internalised Control is likely to lead to an increase in a specific collection of explicit psychological risks which are outlined in this report.

Key advisory actions

- There are five key general messages for teacher's to give to reduce the risks of internalised control
- There is some evidence that risks may be mitigated by teacher attention
- Elements from boarding school which provide protective factors for girls, may be replicated in all schools

Report Contents

1. Data sample

Data from Years 7-13 gathered from the STEER Education AS Tracking programme has been included in this report. 92 UK mainstream secondary schools were included in the pre-lockdown sample (data collected from 2018-March 2020). The sample was made up of 7 state academies (pupil n = 3620). In addition, data from 7 independent day schools (pupil n = 2,750) and 8 independent boarding school (pupil n = 4,013) was included in section 5 to provide comparison. The sample included 51% girls, 49% boys. Schools self- selected to participate as part of a commercial programme offered by STEER Education to track and improve social-emotional biases. In-school pupil cohorts were selected to be tracked by schools according to time and financial resources. STEER did not specify specific groups to track over others to any school. State academies reflected a wide diversity of affluence if measured against FSM data. No particular experimental design in school cohort selection was used.

2. Data collection method

Data was collected using the AS Tracking online assessment. The AS Tracking assessment was developed over a 15 year period to overcome the problems associated with pupil welfare self-reports. [1] The principle advance within AS Tracking is the measurement not of a pupil's direct perception of their own wellbeing/welfare via direct item questions, but by measuring the pupil's pattern of affective-social biases: *steering biases*.[2] Measuring steering biases involves a novel and unusual assessment process, which pupils find both accessible, often enjoyable, and has been shown to provide highly accurate insight into data otherwise not available from pupils. [3] Steers' multi-year research programme has shown that patterns of steering biases correlate 82% with specific wellbeing and welfare risks.[4]

Data for this report was collected in seven rounds: October 2018, February 2019, October 2019, February 2020, April- July 2020 (lockdown), Sept-October 2020 (post lockdown school return) and November-December 2020 (second half of term). Pupils completed the STEER Education AS Tracking assessment at each assessment round. The AS Tracking assessment is an online pupil-voice assessment designed to measure and track the steering biases of a pupil. A four factor model of steering biases is assessed through a 32 item instrument. 16 items assess a pupil's generalised steering biases- biases which are not triggered by any particular context. 16 further items assess a pupil's contextual steering biases- specifically biases which are triggered by the context of school. By comparing the two sets of data the effect of school as a context- or road- which impacts pupil steering can be quantified. Assessment items are shown in Appendix A.

3. Data model

The AS Tracking data measures four affective-social steering biases: Self-disclosure, Trust of Self, Trust of Others and Seeking Change (Figure 1). The significance of these biases for healthy adolescent social-emotional development has been articulated by the assessment authors.[5678] [9] Steering sits within a range of literature fields including self-regulation, executive function, metacognition, social priming and cognitive biasing[10].

The ability to regulate, or steer, these biases is a critical developmental skill underpinning mental health, social competencies and the ability to access learning. Steering is expected to improve over maturation but can be adversely affected by events in a child's life. Patterns of bias which become entrenched and iterated reduce the ability of a child to respond appropriately to the situation around them. Steering is also contingent

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[1] https://steer.global/en/thought-leadership/research/Thinking-straight-or-true-1.2.pdf
[2] https://en.wikipedia.org/wiki/Steering_cognition
[3] https://steer.global/en/thought-leadership/research
[4] https://steer.global/en/thought-leadership/research/AS_Tracking_Assessment_An_ecological_assessment_to_measure_Steering_Cognition__02.07.18.pdf
[5] https://steer.global/en/thought-leadership/research/Self-regulation.-The-ability-to-steer-JW-2.9.16.pdf
[6] https://steer.global/en/thought-leadership/research/AS-Tracking-a-psychological-and-developmental-understanding-of-trust-of-self-JW-28.8.16.pdf
[7] https://steer.global/en/thought-leadership/research/AS-Tracking-a-psychological-and-developmental-understanding-of-self-disclosure-JW-28.8.16.pdf
[8] https://steer.global/en/thought-leadership/research/AS-Tracking-a-psychological-and-developmental-understanding-of-trust-of-others-JW-28.8.16.pdf
[9] https://steer.global/en/thought-leadership/research/AS-Tracking-a-psychological-and-developmental-understanding-of-Seeking-Change-JW-28.8.16.pdf
[10] https://en.wikipedia.org/wiki/Steering_cognition

upon the 'effect of the road' on which a child drives. School is a road, home is another road. Contexts such as home and school have a quantifiable impact on the biases a child develops. Tracking the changes in a pupil's steering biases, therefore, exhibited both in school, and outside, can give an indication of adverse but hidden changes in those environments, and have often highlighted unknown safeguarding concerns.

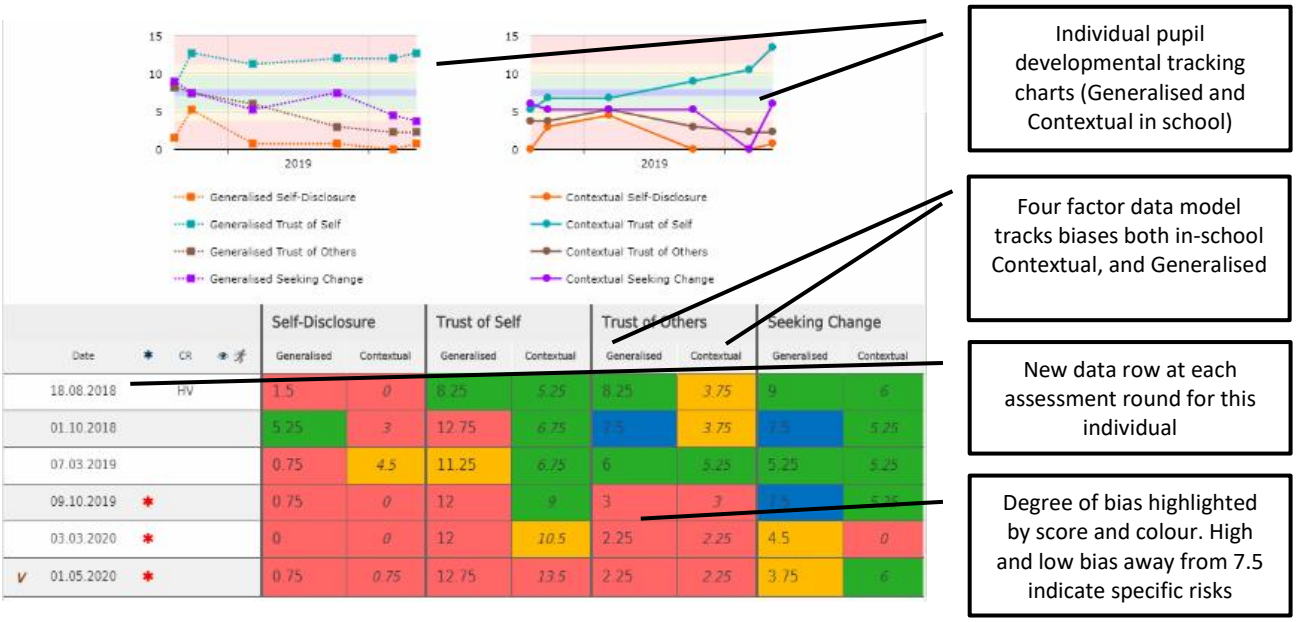

Figure 1. Example of data output for an individual pupil, tracked over six assessment rounds

3.1. **Year on year national data stability**

Pupil steering biases have proved to be stable for any given age of pupil over the past years. Age –related mean bias score trajectories are observed for each factor. Figure 2a. shows the age-trajectories for several biases we measure in both 2018 and 2019.

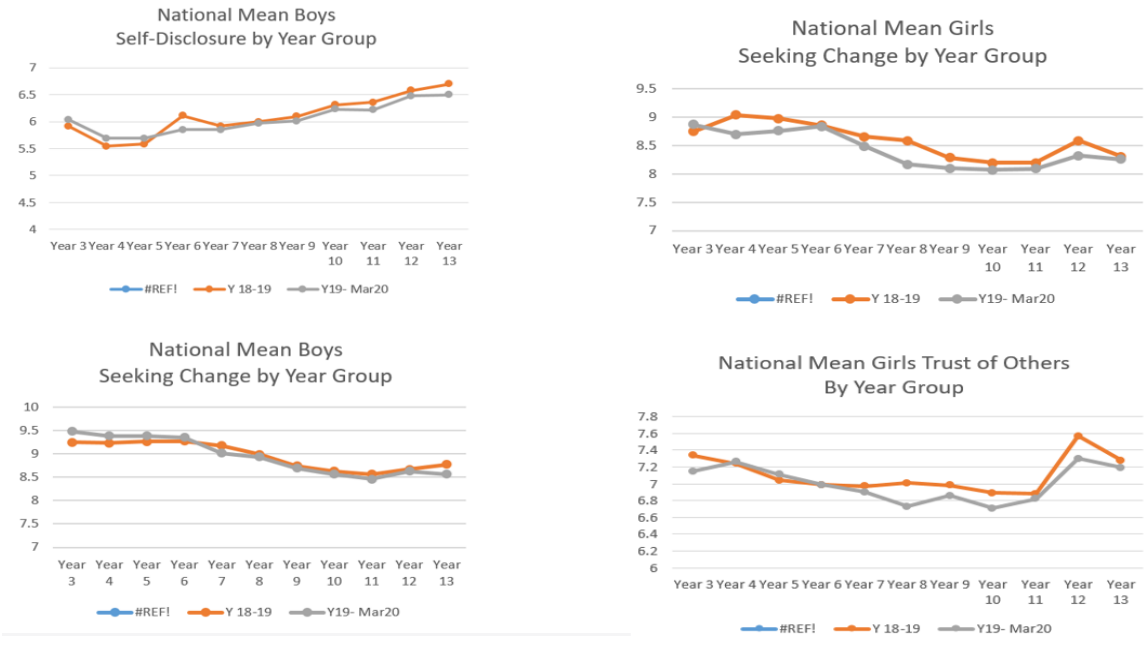

Figure 2a.

By contrast, Figure 2b. includes data from April- October 2020 (lockdown and school return). The deviation from previous trajectories is clear. Lockdown was an event which has dysregulated steering against historical norms.

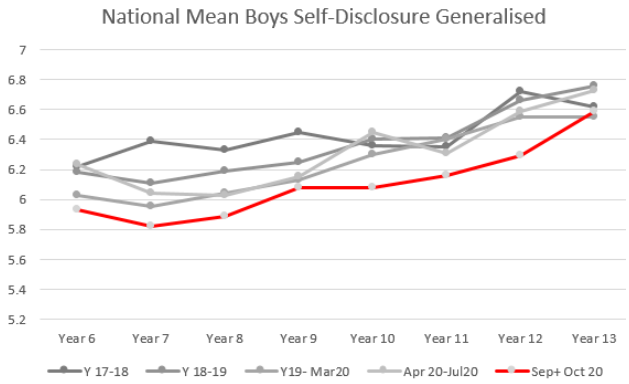

Figure 2.a

4. State sector key findings

Section 4 reports exclusively on state sector cohort data.

4.1. State schools have fewer protective factors post-lockdown than pre-lockdown

Pupils (aggregated data for boys and girls) are now 33% more socially-emotionally dysregulated within school than outside school compared to before lockdown. Figure 3 shows the relationship between the percentage of polar biases exhibited pre, intra and post pandemic. The blue line shows pupils generalised polar biases, the red shows their in-school polar biases. The increase in in-school polar biases indicates that school provides fewer protective factors. This is likely to be a reflection of school Covid-restrictions: social distancing, disrupted teaching, absent teachers, self-isolating, loss of social interaction, mask wearing etc. The fact that *generalised* biases have not risen indicates this is a school-specific effect not related to lockdown in general.

This data supports the fact that Covid-restrictions are having a significant adverse effect on pupil wellbeing.

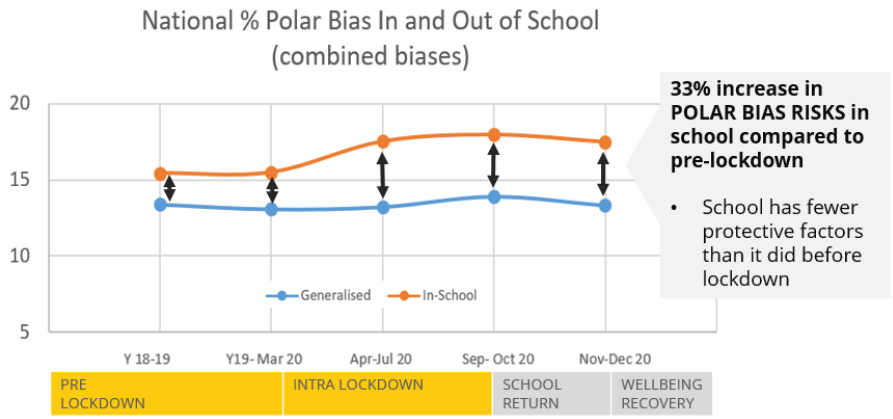

Figure 3. State sector in and out of school polar biases

4.2. Increased in-school risks are driven by girls

In November- December girls exhibited 49% more polar bias risks in school than boys. Figure 4 shows that girls exhibited a total of 21% polar biases, up from 16.9% pre pandemic. Taken as a measure of poor social-emotional self-regulation, this suggest a corresponding decline in healthy self regulation of about 24% over the course of the pandemic.

By contrast, boys, shown by the blue line, had returned to pre-lockdown percentage of 13% polar biases, indicating no overall adverse impact, despite some adverse impact during the first lockdown.

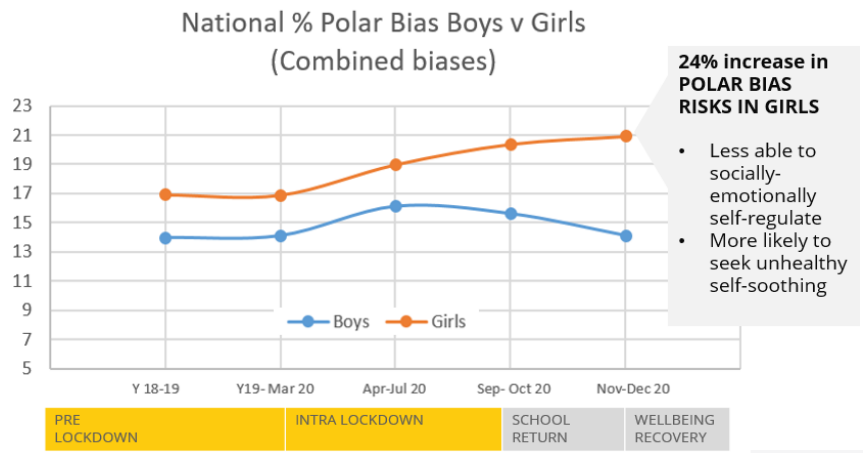

Figure 4. State sector boys v girls polar biases

4.3. Risks increase by age for girls, but may be mitigated by teacher attention

Data from the November-December period shows that girls in Y12 are now the most vulnerable cohort in secondary school. Figure 5 shows how the percentage of polar biases in-school increases for girls from Y7-12, whilst over the same age cohort, boys in-school polar biases decrease. As a consequence, school provides 67% less protective factors for girls in Y12 than for girls in Y7. By contrast, school provides 20% more protective factors for boys in Y12 compared to boys in Y7. By Y12, girls are more than 130% more at risk socially-emotionally in school than boys.

There is some evidence that teacher attention may be a protective factor for girls. Figure 5 suggests that the expected trend line of increases in polar biases by age is not followed in Y11 and 13. Instead, there are declines in risks. One possible explanation is that increased teacher focus on Y11 and Y13 may provide additional protective factors for these year groups.

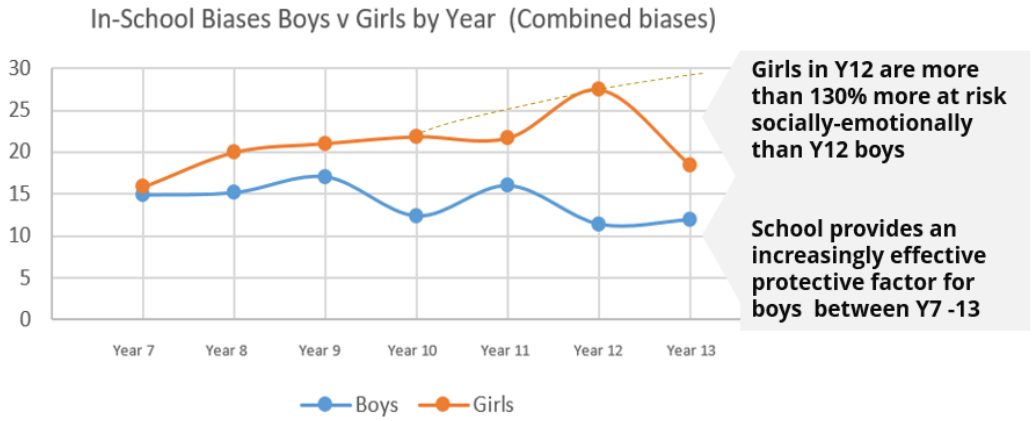

Figure 5. State sector polar biases by year group (boys and girls)

4.4. Hidden rather than observable risks now drive risks for adolescent girls and boys

By September through t December, 8 / 10 girls aged 11-18 had developed biases to be low disclosing in school. This compared to 6/10 girls in the year before lockdown began. This indicates that adolescent psychological risks are now dominantly being driven by internalized hidden behaviours. Only 7% of steering bias risks are now externalised, compared to 81% which are internalised.

Internalised risks are less likely to be visible to teachers or by professional observation and are likely to go undetected. This challenges the assumption that children who are not misbehaving, acting out or externalising concerns, are thriving. It also challenges mental health approaches which rely on third party observation data and lack ways to detect hidden risks.

Figure 6. 81% of all risks are now internalising, compared to 7% which are externalising. 8/10 girls now hide, or deflect, their concerns in the context of school, making detection a challenge.

4.5. Girls are continuing to seek CONTROL on their backstage as a way of coping

More than 3/10 girls now use INTERNALISED CONTROL as a psychological strategy, a 54% increase since the start of the pandemic. This percentage has continued to rise since school return in September, see Figure 7. Boys have also seen an increase in internalised control from 1/10 pre-pandemic to nearly 2/10 in September, though November-December data suggests this may now be declining again.

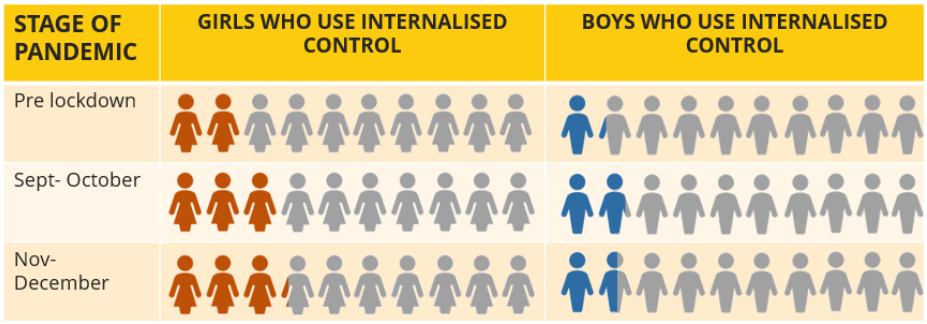

Figure 7. The proportion of pupils now exhibiting internalised control

Internalised Control is a psychological response to an anxious, uncertain environment. Crucially, Internalised Control conceives of a person having both a front stage and a back stage. The back stage is the inner world of the person; the front stage is the public visible face of the person.

Figure 9 illustrates what kinds of inner mental scripts a young person, or pupil, may have on their front and back stage which lead to when exhibiting Internalised Control. The front stage script is shown in RED on the right. The back stage script is shown In GREEN on the left.

For example, *"I can't control what's out there"* (i.e.- a young person's feelings about the pandemic out there) leads to an inner backstage psychological response "*But I can control this…".* It is a strategy is to respond to uncertainty, change, unpredictability on the front stage by controlling one's own inner world.

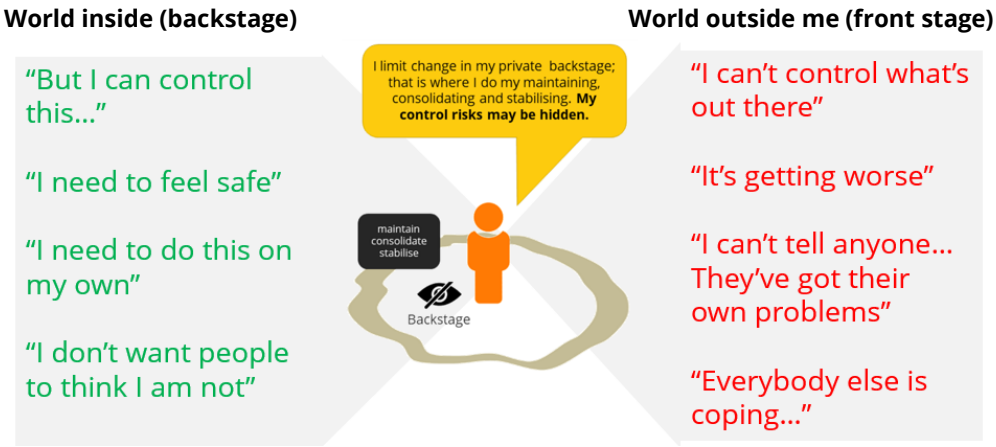

Figure 8 . The inner scripts of Internalised Control

4.6. What are the psychological risks for pupils with Internalised Control?

Internalised control has specific psychological risks for a young person, in particular when established over time. See Figure 10. These manifest psychological problems arise from the steering bias of Internalised Control which, like a biased steering wheel of a car, mean that the car (person) tends to respond to the challenges ahead in a fixed and iterated way. Under pressure, they self-sooth through internalised control (controlling eating, self-harm, obsessive patterns of thinking, ruminating). In times, of anxiety, they do not reach out for help. They exert control through self-discipline and perfectionism. They become fixed and intractable in their thinking. They may be drawn to co-ruminating intense relationships.

Internalised Control risk summary:

- Project a different, deflective public persona to hide concerns
- Unable or unwilling to seek help- lack of agency / intractable
- Undisclosed online attachments
- Stress related difficulties e.g. anxiety because of pressure on self
- Hidden perfectionism, unhealthy personal control
- Fixed patterns of thinking, drawn to fundamentalist versions of truth
- Internalised controlled self-soothing e.g. controlled eating, controlled behaviours, self-harm

We would expect to see an increase of these psychological concern and behaviours, especially amongst girls, in the coming months**.**

5. What works?

5.1. Key general messages to reduce the risks of internalised control

Having identified the specific risk of internalised control as the major increasing psychological risk for girls which increases with age, targeted messages can be given by schools to this cohort. COVID-related disruptions of school life- face masks, social distancing, social bubbles, degraded teaching, loss of activities, unpredictable timetables- are all factors contributing to this rise in internalised control. Whilst many practical restrictions preventing the school environment becoming more stable, predictable and available, we advise **teachers give key general messages the coming weeks as outlined in Figure 9.**

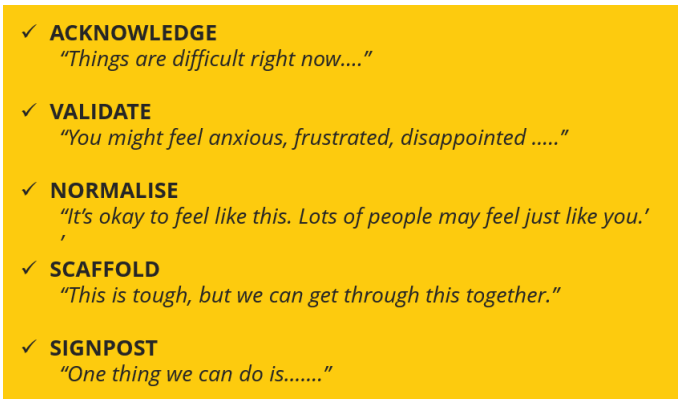

Figure 9. The 5 key messages to reduce internalised control

1. ACKNOWLEDGE
   Acknowledging means expressing that "*Things are difficult right now....*" Acknowledging prevents worries being internalised. The opposite would be saying things like "Come on! We can get through it!

2. VALIDATE AND NORMALISE
   Validating means expressing "You might feel anxious, frustrated, disappointed .....it's okay to feel like this." Normalising means expressing "Lots of people may feel just like you." Validating and normalising reduce the sense of being isolated and unable to reach out to others. They facilitate openness and the ability to seek and receive support.

3. SCAFFOLD AND SIGNPOST
   Scaffolding means expressing "This is tough, but we can get through this together." Scaffolding is when teachers come alongside pupils to accompany them on the journey. It involves teachers and pupils walking together. Signposting means expressing concrete steps that can help i.e. "One thing we can do is....." Signposting means providing clear, specific, achievable in-school steps that pupils can take.

   These steps may in themselves be generalised good practices for mental wellbeing. However, in contrast to generalised wellbeing messages which are broadcast to all at any time, signposts are specific to a situation, targeted for a reason and to an audience.

   Specific targeted signposts for Internalised Control can be discussed with STEER Education or other professional wellbeing support professionals.

5.2. Risks may be mitigated by teacher attention

This latest data suggests that school is working for better boys in providing protective factors. Figure 10, shown earlier, supports the hypothesis that increased teacher attention may offer the strongest protective factor for girls, on the basis of reduced risks evidenced in Y11 and 13 girls. What works more widely therefore may include:

- ✓ Giving pupils more teacher time *(channels for support)*
- ✓ Pupils hearing stronger messages that their education matters *(sense of purpose and direction)*
- ✓ Pupils feeling noticed *(sense of being individually valued)*
- ✓ Pupils having a clear focus on achievable academic goals *(which increases pupil agency).*

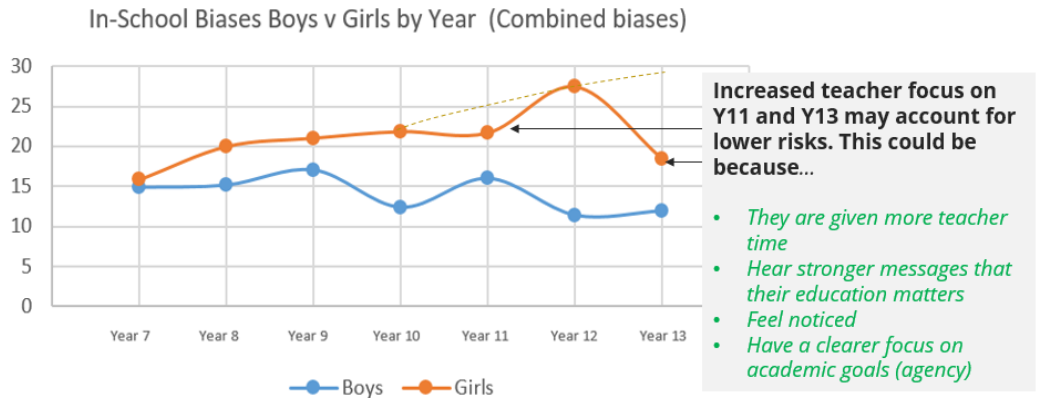

Figure 10.

5.3. Elements from boarding school which provide protective factors for girls may be replicated

Our recent data suggests that increases in polar low Self-Disclosure risks in girls- the principle driver of internalised control- has been mitigated by a boarding environment. Figure 11 shows comparative data from state academy, independent day and boarding schools pre, intra and post pandemic. Whilst state academy has seen a rise of +29% in girls polar low self-disclosure, independent day schools are now seeing a rapid rise of +40% since pre pandemic.

By contrast, girls in independent boarding have shown only a modest rise of 17% in the same period. Factors which may be mitigating this increase in a boarding environment include consistent social bubble; daily routines; regular (online) tutor interaction; teacher's affirming non-academic activities as core to self-care; encouraging peer pods in which pupils look out for each other; emphasising open channels for pupils to access staff support.

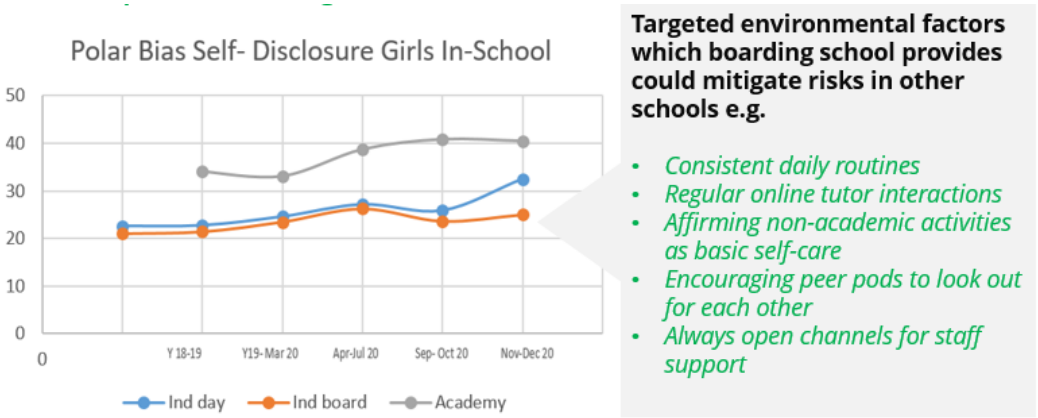

Figure 11.

6. How will we know if this strategy is working?

Repeat steering bias tracking in the coming 3-9 months, will indicate whether the divergence between generalised and in-school polar risk biases narrows. A reversion to pre-pandemic differences will indicate an improvement in in-school protective factors.

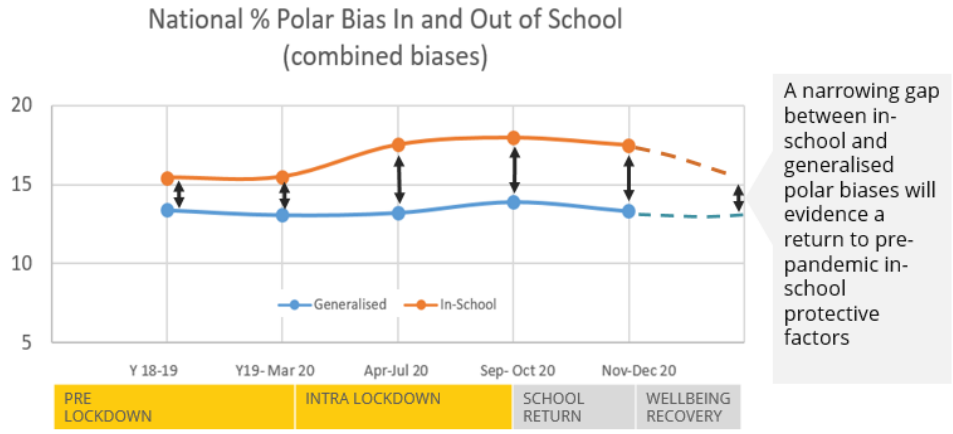

Figure 11

6.1. Future tracking assessment timeline

The next assessment data, which will include January-February data, will be available at the end of February. Using STEER's remote technology, data will be obtained whilst pupils are being educated remotely. This will provide a direct comparison with the impacts of remote schooling in the first lockdown. Subsequent data is likely to be available at the end of April, June and August.

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Disclosure
The authors acknowledge a commercial interest in STEER Education.

Appendix A

AS Tracking is designed to overcome limitations in traditional wellbeing, or mental health, pupil self-reports when used as whole-population tracking tools. Traditional reports suffer from a reluctance of pupils to answer honestly when they must also be identified as the respondent to their teachers; from an inability of pupils to understand sometimes complex, abstract questions used in surveys; from inaccurate pupil self-perception which skews the usefulness of the responses; from unhelpfully planting ideas about mental health risks in the minds of students.

To overcome these problems, AS Tracking uses a structured, projective assessment methodology which is described in detail elsewhere.[11] [12] The assessment process utilises the capacity of children to form an imagined place in their minds and then explore how they respond to set of priming cues. It. It uses simple, neutral, concrete language, avoiding suggestive ideas to trigger a pupil's unconscious affective-social biases.

The assessment has four parts. A visualisation followed by associated 16 questions exploring a pupil's generalised biases; a second visualisation followed by associated 16 questions exploring a pupils contextual (in-school) biases. Some items scales are inverted. The whole assessment process takes a pupil 10-15 minutes to complete. The same procedure is repeated each assessment round.

Pupils listen with headphones	Pupils respond on 6 option Likert scale (Definitely---- Definitely not)	Pupils listen with headphones	Pupils respond on 6 option Likert scale (Definitely---- Definitely not)

Four assessment items in each set of 16 relate to each of the four affective social bias factors: self-disclosure, seeking change, trust of self and trust of others. Patterns of bias are automatically analysed at a raw and factor score level for variance, polarity and speed of responses. Patterns are analysed against historic AS Tracking database which contains more than one million complete item-set responses collected by the same assessment methodology over seven years. Attempts to fake are detected through pattern matching.

[11] https://steer.global/en/thought-leadership/research/AS_Tracking_Assessment_An_ecological_assessment_to_measure_Steering_Cognition__02.07.18.pdf
[12] https://vimeo.com/217968535

Sample AS Tracking visualisation 1 script

Imagine yourself in a place that you know, or a place that you can imagine. It can be anywhere you choose.
Look around. What can you see, what can you hear?
Choose a part of this space that you would like keep for yourself. What can you put around it to show that it is yours? Perhaps a rope, a wall, a ditch, a line, a fence, or anything else you can think of.
From now on, we are going to call this 'your space'.
Walk into your space. What is happening outside your space?
What is happening inside your space?
Next, you will answer some questions about your space.

Sample AS Tracking assessment items

Generalised questions
Something changes outside your space. Does your space change too?
Someone asks you to change your space. Will you change it?
You need something in your space. Do you want other people to help you get what you need?
Imagine you could keep part of your space private. How much of your space would you keep private?
Do you like to explore new areas of your space?

Sample AS Tracking visualisation 2 script

Now imagine you can see those from your school in your space with you.
What do you see those from your school doing?
What do you see yourself doing?
How do you feel about those from your school being in your space with you?
Next, you will answer some questions.

Contextual questions
Something changes in your school; does your space change too?
Someone from your school asks you to change your space. Will you change it?
You need something in your space. Do you want someone from your school to help you get what you need?
When people from your school are in your space, how much of your space will you keep private?
When people from your school are in your space, do you like to explore new areas of your space?