

## Examination Pressures on Children and Young People: Are They Taken Seriously Enough?

### Introduction

There are widespread concerns among those who work in, and with, English primary and secondary schools, over the pressures that children and young people are experiencing when preparing for, and taking, Year 6 National Curriculum Tests (NCTs), General Certificate of Secondary Education examinations (GCSEs), and General Certificate of Education Advanced Level (A-Level) examinations<sup>i</sup>. The concerns regarding Year 6 NCTs are not new. Since the late 1990s teachers' professional bodies, educational commentators, and researchers, have drawn attention to the potentially damaging effects on the motivation and self-esteem of pupils, and a narrowing of the curriculum, arising from an excessive focus on testing in the latter stages of primary education resulting from top-down accountability pressures<sup>ii</sup>. Concerns regarding GCSEs and A-Levels are more recent and have arisen since the reform of curriculum content, assessment, and grading, from 2014 onwards<sup>iii</sup>. The move to increased, and more difficult, curriculum content that is largely assessed through terminal exams, has coincided with an increase in the number of students requesting support or counselling to cope with the pressures and reporting adverse effects on mental health (including self-harm, anxiety, depression, and suicidal thoughts)<sup>iv,v</sup>. Concerns regarding the stresses of taking exams were rejected by the incumbent Minister of State for School Standards, Nick Gibb, in April 2019<sup>vi</sup>. Nonetheless, the Office of Qualifications and Examinations Regulation published in 2019 a blog on understanding exam anxiety<sup>vii</sup> and a student guide for coping with exam pressures<sup>viii</sup>.

### Gone Missing from Public Discourse: The Role of Individual Differences

What is largely absent from the public discourse on the issue of exam pressures is an understanding of the importance and role of individual differences. That is, students react and respond to the pressures of taking tests and exams in very different ways. For some students, pressures can be a source of motivation and provide a push to succeed that might not otherwise have been present (the proverbial 'kick up the backside'). Other students are relatively impervious to the effects of pressure. However, for another group students, pressures can become overwhelming and a source of worry and anxiety. It is the latter group of students for whom exam pressures pose a risk to achievement and mental health, and are the cause for concern.

**Key Point #1:** *In moving the public discourse forward, the role of individual differences must be acknowledged. This is not to diminish the importance of the pressures associated with curriculum content, assessment, and grading. Rather it is to highlight that a transaction*

*occurs between these pressures and factors internal to the student that determines whether exam pressures are harmful.*

### **The Impact of High Exam Anxiety on Students: What does the Evidence Show?**

There is a large and robust body of work, evidenced in meta-analyses, to show that higher exam anxiety is associated with lower exam performance<sup>ix,x</sup>. These types of studies, however, do not unpick the critical chicken and egg question: is it the high exam anxiety leading to lower exam performance, or does lower exam performance lead to higher anxiety? Importantly, longitudinal studies that model these relations over time have shown that higher exam anxiety does indeed result in lower exam performance, through interfering with the cognitive resources that are required to perform during exams, namely memory, attention, and the ability to mentally manipulate information in one's mind<sup>xi</sup>. Critically, this effect of anxiety is unrelated to ability and can affect students of all aptitudes. One study estimated the impact of high exam anxiety on exam performance to be two GCSE grades per subject for English, mathematics, and science<sup>xii</sup>.

Higher levels of exam anxiety are also associated with lower student wellbeing and an elevated risk of poor mental health<sup>xiii</sup>. One study found, with 96.6% reliability, that highly exam anxious students met the criteria to be diagnosed with a clinical anxiety disorder<sup>xiv</sup>. Furthermore, in a study of adolescent suicide in England over a sixteen-month period in 2014-15, Coroner's reports specifically cited exam pressures as a specific cause in 15% of cases<sup>xv</sup>. Nonetheless, there remains a steadfast view, among some commentators, that diminishes and belittles the anxieties experienced by children and young people about their exams as being somehow less serious than those faced by adults<sup>xvi</sup> and indicative of the so-called 'snowflake generation'. An oft-repeated stance made by academically successful adults who have performed well in their school exams, is that exams are 'supposed to be stressful'<sup>xvii</sup>.

**Key Point #2:** *In moving the public discourse forward, it is critical that evidence is used by educators, educational commentators, and policy makers, to inform their understanding of how high exam anxiety can detrimentally impact on students' education and mental health. Views that do not acknowledge the perspectives of children and young people lack authority and sincerity by not adequately recognising their experience.*

### **How Many Students Experience High Levels of Exam Anxiety?**

Few studies have directly addressed this important question which is further complicated by no existing agreed standard for defining what constitutes 'high' exam anxiety. One approach is to adopt a criterion based on the frequency and/ or severity by which exam anxiety is experienced<sup>xviii</sup>. Studies using a frequency criterion (the point at which exam anxiety was

experienced ‘often’ or ‘nearly always’) have shown that students reaching this threshold report clinical levels of anxiety and depression<sup>xiv, xix</sup>. In a 2014 study (prior to GCSE reform) of 2,345 English secondary school students in Years 10 and 11 (ages 14-16 years), 16.4% met this criterion (10.3% of males; 22.5% of females)<sup>xx</sup>. Results from a more recent study in 2019 of 6,565 English secondary school students in Years 7 through to 13 (ages 11 to 18) using a cognate approach, based on a severity criterion, are shown in Figure 1 below<sup>xxi</sup>. These data (collected post GCSE reform) show a lower percentage of male students aged 15-16 years (6-7%), and a slightly higher of female students (23-24%), reporting high levels of exam anxiety compared to the earlier 2014 study<sup>xix</sup>.

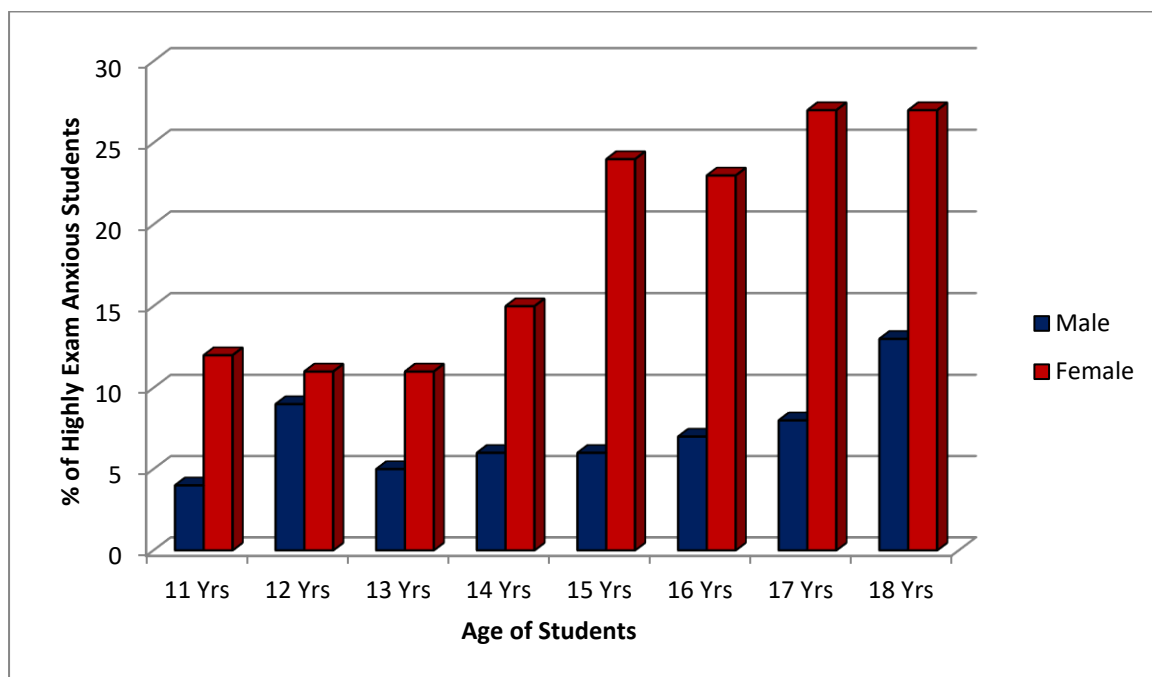


Figure 1. The percentage of students from English secondary schools reporting high levels of criterion-based exam anxiety.

An alternative to the criterion based-approach is to use a norm-based approach to adjust for the typical level of exam anxiety reported, irrespective of whether that is high or low by criterion-based standards<sup>xxii</sup>. In a 2007 study of 1,348 English secondary school students in Years 10 and 11, 6.3% of males and 16.6% of females reported high levels of exam anxiety<sup>xxiii</sup>. When data from the 2019 study<sup>xx</sup> is presented in this way, shown in Figure 2 below, a slightly higher percentage of male (8.5%) and female (17.1%) students, aged 15-16 years, reported high levels of exam anxiety<sup>xxi</sup>. Thus, relative to the average level of exam anxiety, the distribution of exam anxiety scores has become less equal and there is now a greater proportion of students in Years 10 and 11 reporting high levels of exam anxiety<sup>xxiv</sup>. Any conclusion over changes in exam anxiety, however, must acknowledge the differences in cohorts and measurement instruments used in the pre- and post-GCSE reform studies.

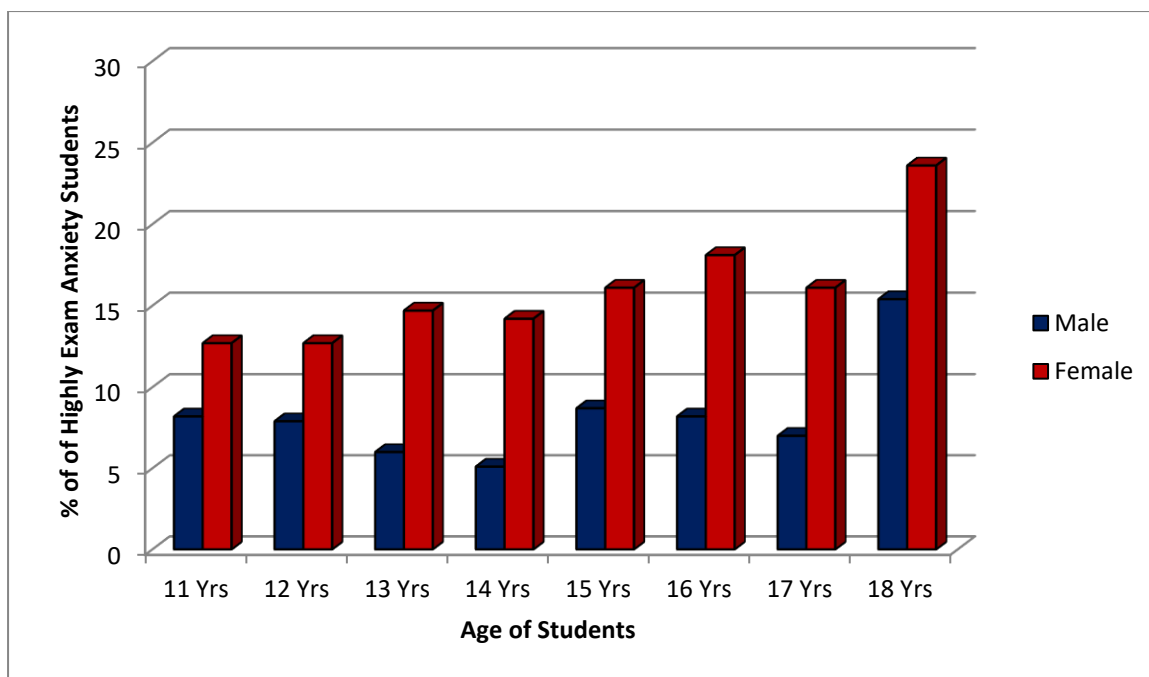


Figure 2. The percentage of students from English secondary schools reporting high levels of norm-based exam anxiety.

**Key Point #3:** *In moving the public discourse forward, a consensus is required on how ‘high’ exam anxiety is defined. Once this consensus has been achieved, it will be possible to advance the evidence base with more certainty. It is notable that data collected before GCSE reform showed that between 6.3% and 22.5% of students reporting high levels of exam anxiety (depending on gender and the approach taken to judge ‘high’). Rather than solely asking whether exam anxiety has increased, a germane question would be to ask why public discourse around exam anxiety was so limited prior to 2014.*

### Moving Forward

There are well-evidenced psychological interventions for secondary school students that can be used to help students learn and practice approaches for managing exam anxiety. One such intervention focused specifically on students aged 14-16 years (STEPS) is a six-session programme delivered in small groups that combines cognitive-behavioural principles (how to challenge exaggerated beliefs that underpin anxiety, how to control physiological reactions to anxiety, and how break negative cycles of behaviour) with study skills. One study, using the ‘gold-standard’ randomised control trial design, showed moderate to large reductions in exam anxiety in students after they had completed STEPS<sup>xxv</sup>. An ongoing question for practitioners and policy makers is whether interventions should be universally offered to all students or targeted at those most in need. STEPS falls into the latter category and is most effective when targeted solely at highly exam anxious students<sup>xxvi</sup>. Students can be screened for high exam anxiety using the same instrument as the one used to generate

data for Figures 1 and 2<sup>xxvii</sup>. Given practical timetabling constraints, schools may face difficult logistical decisions over how to schedule a targeted intervention at a relatively sizable proportion of the Year 10 and/or 11 cohort.

There are particular challenges in ensuring that children and young people who would benefit from such interventions have the opportunity to do so. The first challenge is how to raise awareness of these interventions among policy makers, school leaders, and school staff with responsibility for wellbeing and/ or pastoral care of students. A further challenge is determining who should be responsible for delivering these interventions and who will provide funding. School staff may not have the requisite skills or experience (but may be prepared to receive training, although this may have cost implications for schools), educational psychology services operate on traded time models with cost implications for schools, and child and adolescent mental health services do not have resources to cope with increased demand<sup>xxviii</sup>. Schools may not be prepared to fund such interventions from stretched budgets where there are many competing priorities. The jointly funded initiative by the Department for Education and the Department for Health and Social Care, to train school mental health practitioners, could be one potential route to deliver such interventions<sup>xxix</sup>.

There is a notable gap in the research literature for primary school students, and those preparing for and taking Year 6 NCTs. We do not know what proportion of students in primary schools are highly test anxious and what interventions might be effective for this age group. There are no instruments developed specifically for this age group that have been shown to be psychometrically sound and no norms for use by practitioners. There is a pressing need for researchers to address these issues in order to inform policy and practice for primary schools, teachers, pupils and their parents.

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<sup>i</sup> Hutchings, M. (2015). *Exam Factories? The impact of accountability measures on children and young people*. London: National Union of Teachers.

<sup>ii</sup> Harlen, W. & Deakin Crick, R. (2002). *A systematic review of the impact of summative assessment and tests on students' motivation for learning* (EPPI-Centre Review, version 1.1) Research Evidence in Education Library Issue 1 (London, EPPI-Centre, Social Science Research Unit, Institute of Education).

<sup>iii</sup> Ofqual (2013). *Reforms to GCSEs in England from 2015*. Coventry: Ofqual.

<sup>iv</sup> Thornton, S. (2016). Fear of failure: Supporting students with exam stress. *British Journal of School Nursing*, 11(5), 252–254.

<sup>v</sup> The Key (2017). *State of Education Survey Report*. <https://view.joomag.com/state-of-education-report-2017-state-of-education-booklet-final-web/0676372001494577623/p22?short>

<sup>vi</sup> Hinds, D. (2019). *Exam stress in part of life*. Sunday Times (28<sup>th</sup> April, 2019).

<sup>vii</sup> <https://ofqual.blog.gov.uk/2019/03/01/understanding-test-anxiety/>

<sup>viii</sup> <https://www.gov.uk/government/publications/coping-with-exam-pressure-a-guide-for-students>

<sup>ix</sup> Hembree, R. (1988). Correlates, causes, effects and treatment of test anxiety. *Review of Educational Research*, 58, 47–77.

<sup>x</sup> von der Embse, N.P., Jester, D., Roy, D., & Post, J. (2018). Test anxiety effects, predictors, and correlates: A 30-year meta-analytic review. *Journal of Affective Disorders*, 227, 483-493.

<sup>xi</sup> Owens, M., Stevenson, J., Norgate, R., & Hadwin, J. A. (2008). Processing efficiency theory in children: Working memory as a mediator between trait anxiety and academic performance. *Anxiety, Stress, & Coping*, 21, 417-430.

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- <sup>xii</sup> Putwain, D.W. (2008). Test anxiety and academic performance in KS4. *Educational Psychology in Practice*, 24, 319-334.
- <sup>xiii</sup> Steinmayr, R., Crede, J., McElvany, N., & Wirthwein, L. (2016). Subjective well-being, test anxiety, academic achievement: Testing for reciprocal effects. *Frontiers in Psychology*, 6, 1994. doi: 10.3389/fpsyg.2015.01994
- <sup>xiv</sup> Herzer, F., Wendt, J. & Hamm, A.O. (2014). Discriminating clinical from nonclinical manifestations of test anxiety: A validation study. *Behavior Therapy*, 45, 222-231.
- <sup>xv</sup> Rodway, C., Tham, S. G., Ibrahim, S., Turnbull, P., Windfuhr, K., Shaw, J., ... & Appleby, L. (2016). Suicide in children and young people in England: a consecutive case series. *The Lancet Psychiatry*, 3, 699-700.
- <sup>xvi</sup> Denscombe, M. (2000). Social conditions for stress: young people's experience of doing GCSEs. *British Educational Research Journal*, 26, 259-374.
- <sup>xvii</sup> See, for instance, some of the comments made in response to Damian Hinds Sunday Times article (endnote iv): <https://www.tes.com/news/linear-gcses-and-levels-cut-exam-stress-says-hinds>
- <sup>xviii</sup> This is the approach used by the OECD for PISA to determine 'high' levels of math anxiety; see OECD. (2013). *PISA 2012 Results: Ready to learn: Students' engagement, drive and self-beliefs (Volume III)*. PISA, OECD Publishing. <http://dx.doi.org/10.1787/9789264201170-en>
- <sup>xix</sup> Warren, M.K., Ollendick, T.H., & King, N.J. (1996). Test anxiety in girls and boys: A clinical-developmental analysis. *Behaviour Change*, 13, 157-170.
- <sup>xx</sup> Putwain, D.W., & Daly, A.L. (2014). Test anxiety prevalence and gender differences in a sample of English secondary school students. *Educational Studies*, 40, 554-570.
- <sup>xxi</sup> Putwain, D.W., & von der Embse, N.P. (2019). *The multidimensional test anxiety scale: User's manual*. Liverpool: John Moores University.
- <sup>xxii</sup> The norm-based approach used to establish 'high' levels of exam anxiety was one standard deviation above the mean.
- <sup>xxiii</sup> Putwain, D.W. (2007). Test Anxiety in UK schoolchildren: prevalence and demographic patterns. *British Journal of Educational Psychology*, 77, 579-593.
- <sup>xxiv</sup> The 2007 study also reported socio-economic and ethnic differences in exam anxiety however they were small compared to the magnitude of the gender differences.
- <sup>xxv</sup> Putwain, D.W., & Prescod, M. (2018). Is reducing uncertain control the key to successful test anxiety for Secondary school students? Findings from a randomized control trial. *School Psychology Quarterly*, 33, 283-292
- <sup>xxvi</sup> Putwain, D.W., Daly, A., Chamberlain, S., & Saddredini, S. (2014). Reducing test anxiety among school-aged adolescents: a field experiment. *Educational Psychology in Practice*, 30(4), 220-240.
- <sup>xxvii</sup> Putwain, D.W., & von der Embse, N.P. (2019). *The multidimensional test anxiety scale: User's manual*. Liverpool: John Moores University.
- <sup>xxviii</sup> Ford, T., Mitofran, O., & Wolpert, M. (2013). Life course: Children and young people's mental health. In S. Davies (Ed.). *Annual report of the Chief Medical Officer 2013, Public Mental Health: Investing in the evidence* (pp. 99 – 114). London: HMSO.
- <sup>xxix</sup> Department for Education and the Department for Health and Social Care (2018). *Government Response to the Consultation on Transforming Children and Young People's Mental Health Provision: a Green Paper and Next Steps*. London: HMSO.