How does poor mental health in the early years of secondary school impact on GCSE attainment?

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“mental health might affect the choices you make.”
Young person

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The importance of mental health during the secondary school years

Mental health problems such as depression and anxiety are common in secondary school children. Recent survey data show that approximately one in seven young people age 11 to 16 will have issues serious enough to impact on their day-to-day lives. Improving prevention and early intervention is a key part of the recent Green paper on young people’s mental health.

Inevitably, for 11 to 16 year olds, this will involve the school setting. It seems clear from listening to young people that their mental health at age 13 or 14 is likely to be bound up with school experiences, and that this might make a difference when they sit their exams at 16. However there is an extraordinary lack of good longitudinal evidence using ‘real world’ data to test this assumption. This study set out to use these kinds of data to test whether mental health problems have a separate, independent effect on educational outcomes, once we’ve controlled for all the other things that cause both mental health problems and academic underachievement, such as family income and social factors. This briefing sets out some of the preliminary findings.

How we did the research

Researchers at the National Centre for Social Research undertook analysis of data from two large longitudinal studies, ‘Understanding Society’ and the ‘Millennium Cohort Study’. As well as regularly collecting information directly from secondary school children and their parents, these studies can be linked to people's exam results using the National Pupil Database. In both studies, mental health was measured using the Strengths and Difficulties Questionnaire (SDQ) at Key Stage 3 (age 11 to 14) with higher scores indicating poorer mental health.

Other background information at this time included various demographic measures, family income, school factors, parental relationships and health, and prior attainment (Key Stage 2 scores). If the families agreed, GCSE attainment was checked in the National Pupil Database at Key Stage 4 (age 15/16).

Analyses were run first in ‘Understanding Society’ and then repeated in the ‘Millennium Cohort Study’. This gives us more confidence in the patterns we found.

2. Transforming children and young people’s mental health provision: A green paper, DfE/DHSC 2017
The findings – connecting mental health and GCSE results

How strong is the relationship between mental health and GCSE results?

There was a clear and strong relationship between mental health earlier in secondary school and GCSE results at age 16:

- **Overall scores**: higher SDQ scores were significantly associated with lower attainment at GCSE. In ‘Understanding Society’ this meant that every one point increase in the young person’s SDQ score at 11 to 14 was equal to dropping one grade at GCSE at 16.

- **SDQ categories**: scores can be grouped into ‘Typical’ ‘Borderline’ and ‘Atypical’, where atypical indicates the most serious problems. Using these groups, we looked to see how many young people did not get the GCSE ‘benchmark’ of five or more passes at A*-C grades including English and Maths. Failure to achieve the benchmark was clearly related to these SDQ groups in both studies.

Analysis of ‘odds ratios’ (the chance that an outcome will occur) in ‘Understanding Society’ showed that young people with atypical SDQ scores earlier at school were three times more likely not to achieve the GCSE benchmark.

Mental health problems predicted even more strongly in the ‘Millennium Cohort Study’ study. Odds ratios showed that young people age 14 with atypical SDQ scores were nearly six times more likely to not to get the GCSE benchmark at 16.

Is the link explained by underlying social, economic and demographic factors?

Adding demographic, economic and social factors into the statistical model did not change the pattern of the results significantly. In ‘Understanding Society’, for example, after these adjustments, those with atypical SDQ scores were still 2.7 times more likely not to get five A* - C grade passes in their GCSEs, compared with their peers who did not have mental health problems.

What else might be linking poor mental health to later GCSE results?

What made the difference was adding young people’s attitudes to school the statistical model. Young people’s happiness with and attitudes to school and homework were the factors that most strongly explained the association between earlier poor mental health and later attainment. If their mental health was poor in Key Stage 3, it was more likely to translate into poor attainment later on if they also felt less happy with school.
What young people say

We were interested in how young people themselves would interpret these findings. We took the preliminary results to a focus group of young people in Years 8 and 9 (age 12 to 14) at a secondary school. Conversations centred both on how school might play a part in their mental health, and on what impact this might have on their exam results.

“It’s not just studying, it’s the whole school environment – friends, bullying, targets, comparing, social media….”

Their comments were insightful. They explained how the general school environment affected how they felt. When we asked how poor mental health might translate into GCSE results, they suggested:

- Fear of failure, stoked by anxiety and leading to poor performance
- Impacts on self-esteem, reducing your own expectations of yourself
- Lack of friends, reducing your social support
- Poor decision making, so that you might make the wrong GCSE choices if you are feeling vulnerable
- Reduced ability to work hard and concentrate

The young people were aware of spirals that set in, so that bad feedback from earlier exams could contribute to poorer mental health and then lead to poorer performance next time. They offered their own perspectives on some of the solutions:

- More targeted and sensitive help for those seen to be struggling
- Masterclasses in particular topics after school for people who need more help in keeping up with different subjects
- Separation of people who are struggling with the subject from those who are not
- Making sure young people know who to talk to if they have a problem
- Promotion of youth mental health ambassadors within the school who are peers
- Increase in lessons that are non-assessed and not part of ‘achievement’.

“If you don’t like the teacher, you won’t like the class.”

“If you don’t like the teacher, you won’t like the class.”

“Sometimes it’s easier not to try.”
Conclusions and next steps

These results cannot explain the whole story, but they do suggest that poor mental health in the early years of secondary school is an important predictor of later exam results. Mental health is often thought of as an outcome, the result of earlier experiences. This study challenges us to think about how it influences other outcomes, even just within the school years. GCSE results are an important passport to the next stages of education. Having good enough results at age 16 allows young people to make choices. Young people’s educational opportunities should not be disadvantaged by their health.

The finding that the association was not just a reflection of earlier inequalities is important. The vital part played by attitudes to school was supported in our conversations with young people in the classroom.

The results also come at a time when the focus on schools as a context for mental health promotion is increasing. September 2020 brings the introduction of statutory relationships, sex and health education to English secondary schools. Also in England, Trailblazer Sites are underway, testing new ways of linking schools with local child and adolescent mental health services. School funding is a matter of concern and debate. Any solutions need to be set in this context.

Relying on pre-existing longitudinal data brings its own challenges, as we do not have measures of everything we might want. We also only spoke to a small group of young people. There is clearly more work to be done to test these results further. However, the results were clear enough to provide a basis for thinking about how young people with mental health problems in the school setting may need extra support to reach their GCSE potential. The research team is keen to widen the conversation with other stakeholders and young people, to consider how this can be taken forward.

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More information

This briefing paper was written by Ann Hagell, Association for Young People’s Health, and Neil Smith, NatCen. For more information about the project and the analyses summarised here, email Neil Smith, Head of Analysis, on neil.smith@natcen.ac.uk

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