

Having hypermobile joints may increase the risk for depression and anxiety in adolescents

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Error bars show 95% CI



Prevalence of generalized joint hypermobility. (A) Shows the difference in prevalence of GJH in participants who meet diagnostic criteria for ICD-10 depression (blue bar) and those who do not (red bar). (B) Shows a significant difference in prevalence of generalized joint hypermobility in depressed and non-depressed participants in male but not female participants. Error bars show 95% CI. ICD-10, International Classification of Diseases-10. Credit: *BMJ Open* (2022). DOI: 10.1136/bmjopen-2022-066130

A link has been found between joint hypermobility and the emergence of depression and anxiety in adolescence, according to a new study by Brighton and Sussex Medical School (BSMS) published in *BMJ Open*.

Researchers found that <u>young people</u> with joint hypermobility were more likely to have <u>depression</u> and anxiety, and that psychiatric symptoms were also more severe among hypermobile participants.

Dr. Jessica Eccles, Clinical Senior Lecturer BSMS and MQ Arthritis Research UK Fellow and lead author said, "Many psychiatric problems, including depression and anxiety, start before the age of 25. It is therefore important to identify the factors that may increase the risk for these disorders. Being aware of the link between hypermobility and depression and anxiety means that we can work on developing appropriate and effective treatments."

Joint hypermobility is caused by a genetic difference in our connective tissue, and because <u>connective tissue</u> is present everywhere in the body, it also influences our fight-or-flight <u>nervous system</u>. When this part of our nervous system works differently, <u>mental health problems</u> are more likely to develop.



The study, which was supported by the Medical Research Council and by MQ and Versus Arthritis, also found that joint hypermobility was more common in females than males. However, it was only among males that joint hypermobility at age 14 years increased the risk for depression at 18 years old.

Although joint hypermobility is associated with <u>anxiety disorders</u> in adults, this link has not previously been explored in a large sample of children or young people.

Lea Milligan, CEO MQ Mental Health Research, said, "MQ is very proud to have supported the ground-breaking work of Dr. Eccles and her team. This study has highlighted the need for more targeted and bespoke support for hypermobile teenagers, particularly girls."

"The findings don't just show the need for support for this group of individuals, but also demonstrate the importance of research that takes a whole mind, body brain approach to health and uses <u>longitudinal studies</u> to improve our understanding of which demographics are at higher risk of depression and anxiety. Congratulations to Jess and her team and we look forward to the next stages in this work so that we can ensure better clinical care and treatment is provided."

Dr. Neha Issar-Brown, Director of Research and Health Intelligence at Versus Arthritis, said, "Hypermobility affects one in four people in the UK. Like other musculoskeletal (MSK) conditions it can have a profound and far-reaching impact on life, causing daily pain, fatigue and often disrupted sleep."

"Previous studies in adults have shown that you are more likely to suffer from anxiety if you have hypermobility, and that the daily toll of painful symptoms can lead to depression. Dr. Eccles' research helps identify who is at risk at a young age, which will enable better, earlier, more



targeted treatments to help young people live well with hypermobility, and prevent or reduce the impact of the condition later in life."

Researchers used an existing data base from The Avon Longitudinal Study of Parents and Children (ALSPAC), which collected data from over 14,000 children and their parents or caregivers, and assessed them for joint hypermobility at both 14 and 18 years old, and depression and anxiety at 18. They then used <u>statistical tests</u> to assess the link between joint hypermobility and depression and <u>anxiety</u>.

More information: Jessica A Eccles et al, Variant connective tissue (joint hypermobility) and its relevance to depression and anxiety in adolescents: a cohort-based case–control study, *BMJ Open* (2022). DOI: 10.1136/bmjopen-2022-066130

Provided by University of Sussex

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