Review of: "The Association Between Fibromyalgia, Hypermobility and Neurodivergence Extends to Families: Brief Report"

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Potential competing interests: No potential competing interests to declare.

The Association Between Fibromyalgia, Hypermobility and

Neurodivergence Extends to Families: Brief Report

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Comments:

This study is an attempt to explore possible links between what the author terms 'neurodivergence' and fibromyalgia and joint hypermobility.

The hypothesised association between these syndromes is reasonable assumption but needs firm data to substantiate. This is a small clinical study. However the work may stimulate a more systematic and rigorous line of future work and in this respect makes a contribution to thinking in this area.

The syndromes considered cover a number of symptoms and in the case of the term 'neurodivergence' a number of different diagnoses, each representing complex interactions between genes and environment as well as help-seeking behaviours. So we are not dealing with single entities with simple causes. The suggestion that dopamine is a pathophysiological link is highly speculative.

The study relates to *Prevalence* as prevalence is measured.

Some more detail about how each syndrome was diagnosed in the families would be helpful as it appears that these rely upon patient recall alone.

Some more information on how close the relatives were maybe with a sample family tree would be illustrative. However, it should be stated that the family tree is subject to significant recall bias.

This bias is compounded by a possible group bias as it is stated that 'This study was conceived after several patients with fibromyalgia and hypermobility raised concerns about potential links with neurodivergent conditions within their families". Hence it may be that those patients are more motivated than the control group to report neurodivergence, or seek help for a possible diagnosis of this.

It is a challenge to draw robust conclusions in the absence of a systematic assessment of relatives of both groups- just relying on recall is subjective. Could it be that OA patient relatives just don't seek help for 'neurodivergent' symptoms, rather than have less potential problems? Perhaps asking both groups whether they have been assessed or not would help address this point as such assessment may be less in the OA group.

Was there a template for a family tree sent to patients? This would add some structure and assist recall for both groups in a more balanced way.

It is certainly true that sleep deprivation and stress reduce the pain threshold, so it is important to assess these in treating pain from these musculoskeletal disorders.

It is stated that "Neurodivergent conditions are present from birth ..... " The predisposition may be present genetically, but many other factors impinge that determine the expression and need for help- stress, life events, social factors etc. ....

The author suggests: "... females are disproportionately overrepresented

within these pain populations, in contrast to the distribution of neurodivergent conditions in the community where

diagnosis in males is more common, perhaps due to under diagnosis in younger females." It is also possible that there is over diagnosis in males.