

## Commentary

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**Commentary on the research article: Kletenik I, Holden SK, Sillau SH, O'Connell N, MacGillivray L, Mack J, Haddock B, Ashworth Dirac M, David AS, Nicholson TR, Attaripour Isfahani SN, Maurer CW, Lidstone SC, Hallett M, LaFaver K, Berman BD, Stone J. Gender disparity and abuse in functional movement disorders: a multi-center case-control study. *J Neurol.* 2022 Jun;269(6):3258-3263.**

Functional movement disorders (FMD) are generally more common in females than males, but the reason for the gender difference is not well understood. In their paper 'Gender disparity and abuse in functional movement disorders: a multi-center case-control study', Kletenik et al. performed a retrospective case-control study to collect self-reported trauma data from 696 patients (512 women) with FMD and compared 141 controls (98 women) and population data to determine gender differences in rates of sexual and physical abuse in FMD.

Higher rates of sexual abuse were reported by women (35.3%) and men (11.5%) with FMD compared to controls (10.6% of women; 5.6% of men). Regarding lifetime history of physical abuse, more women (36.5%) compared to men (27.8%) with FMD reported physical abuse. Among controls, 17.0% of women and 19.4% of men reported a history of physical abuse. History of sexual abuse increased the likelihood of FMD among women by an odds ratio of 4.57 and physical abuse by an odds ratio of 2.80. Compared to other neurologic disease controls, a history of sexual and physical abuse increased the odds of FMD by 7.99. Among the women population, the attributable fraction of childhood sexual abuse to FMD compared to the general population was 0.12%.

The study findings reported by Kletenik et al. are important and suggest that violence against women may account for some of the gender disparity in rates of FMD. Given the complex biological, cultural, and social interplay underlying the pathogenesis of FMD, recognition of sexual and physical abuse is most important. Trauma could hypothetically alter the sense of self-agency and embodiment, which are emerging as important factors in the pathophysiology of FMD. Recently there has been increasing interest in the abnormalities of interoception in functional neurological disorders, the network that is important for self-agency and embodiment. Possibly this could be a route by which sexual abuse predisposes people to the development of FMD. Gender differences have also been reported in interoceptive processing possibly explaining the gender bias in people with FMD. Future studies are required to better understand the effects of gender and sexual abuse in the pathogenesis of FMD.