

Exploring sensory sensitivities in autism and migraine: a cross-sectional survey analysis of atypical sensory processing and its impact on migraine-specific quality of life

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Background: The relationship between autism and migraine has emerged as a significant area of study over the past decade: Atypical sensory processing has been proposed to be a shared feature of both conditions. This can include including heightened (hyper) or reduced (hypo) to stimuli, across visual, auditory, gustatory, olfactory, vestibular and proprioceptive modalities. Moreover, individuals with migraine may maintain a reduced threshold to sensory stimuli between migraine attacks.

Method: In this cross-sectional observational study, we hypothesised that there is a relationship between autism and migraine through atypical sensory processing, which in turn negatively affects the quality of life (QoL) of migraine sufferers. We conducted a survey using validated questionnaires including the Migraine Screening Questionnaire, the Glasgow Sensory Questionnaire (GSQ) and Migraine Specific QoL Questionnaire (MSQ). Funding was provided by Brighton and Sussex Medical School. Data was collected from the Qualtrics platform and analysed using Python software. Data from a total of 201 participants were collected. Statistical analyses included chi squared tests, regression analysis and analyses of variance to examine the data.

Results: We found an overarching relationship between autism, the presence of migraine and having higher sensory sensitivity scores. Results indicate that autistic individuals with migraine have the highest sensory sensitivity scores suggesting a possible exacerbating interaction. Additionally, a negative correlation was found between sensitivity scores and the MSQ, indicating that increased sensory sensitivities reduces the QoL of those with migraine. These findings underscore the need for further research regarding the interplay between sensory sensitivity, migraine and autism is required.

Biography

Liberty Denton-Lock is a fourth-year medical student at Brighton and Sussex Medical School, who has a special interest in migraines and autism. Recently, she completed a year of study at Imperial College London in Medical Humanities, Philosophy & Law, receiving first class honours for her dissertation on Migraine Art, which can be found in the Wellcome Collection catalogues.

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