

## Correspondence

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# Role of stressors in adult fibromyalgia – a response to Kaleycheva et al.

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Dear Editor,

Kaleycheva et al. (2021) undertook a review and meta-analysis of case-controlled studies with the aim of distilling out whether factors such as lifetime stressors impacted on the risk of developing fibromyalgia in adulthood. The authors were attracted to study this as they had been influenced by previous research indicating that there was growing evidence in support of this hypothesis. From their analysis the authors concluded that they were able to confirm a strong relationship between lifetime stressors and the development of fibromyalgia in adulthood, particularly for those who had experienced physical abuse.

However, Kaleycheva et al. (2021) and colleagues fall short in several domains to critically address and account for crucial limitations in their systematic review and meta-analysis which may mean that their conclusions are perhaps not as strong as they claim. Rather unfortunately, this may lead to an exaggeration of the extent of the relationship suggested. Furthermore, there appears to be a lack of consideration regarding the direction of causality. Of greatest concern, is the absence of critical examination of the well-known difficulties posed by the research methods used in the 19 studies included within the analysis.

All the case–control studies included within the meta-analysis used interviews or questionnaires which elicited people’s retrospective experiences and memories over their lifespan. The purpose of memory is as a system or process that stores what we experience to allow us to use it in the future. In essence, it is the retention of data to allow its use to predict future actions. Relying on patient’s retrospective, autobiographical memory is troublesome from several perspectives. Firstly, autobiographical recollection varies among individuals over a period of weeks, let alone decades (Berntsen, Hoyle, & Rubin, 2019). Recollection of memories is highly influenced by the recaller’s internal state at the time of recollection (Bower, 1981). Further, this mood congruent recall is therefore likely to exaggerate the memories of previous painful and emotional times if fibromyalgia patients are prompted to recall such. Negative events in everyday life often include more dominant and intrusive details which are seen through a more negative lens in memory (Congleton & Berntsen, 2020). Sadly, stressful life events are so ubiquitous to being alive and human that they are rather the norm. Together, evidence from memory research highlights that it is exceedingly likely that a relationship will be found between being in pain currently and the prompting to recall painful memories of past event(s). In summary, patients with fibromyalgia will have more availability of access to previously distressing events in their memory. However, there is no convincing evidence presented in this meta-analysis that the relationships discovered are no more than a response to simply being in pain. Furthermore, no direction of causation can be determined from cross-sectional research designs and retrospective self-report methods. It can perhaps help to tease out the complex relationship that, as expected, people experiencing on-going pain and debility will have greater access in recall and are therefore more likely to report previous painful experiences. This is important for the well-being, adjustment and coping of patients with chronic pain.

The authors set the scene in the second paragraph whereby they define fibromyalgia in their view as a functional disorder aligned with a psychosomatic or somatoform condition and causation. This is puzzlingly presented here as though this is an established and agreed upon consensus within the field of fibromyalgia research and clinical practice. This is far from the case. Unfortunately, such possible bias leads the study away from considering alternative models and views of fibromyalgia and is at odds with pain researchers and clinicians working with persistent pain in the field. In essence, without explaining alternative conceptualisations the paper perhaps loses credibility and, in this case, may lead to the researcher’s confirmation bias of their own held views on the matter.

There is no attention given within the paper that living with a chronic pain condition, such as fibromyalgia, can in itself be stressful, exhausting, debilitating, and can be distressing and traumatic potentially leading to hypothalamic–pituitary–adrenal (HPA) disruption as a consequence, not a cause. As symptoms of fibromyalgia vary greatly day to day, and the HPA-research findings are inconsistent, it is likely that this is at least in part responsible for the variability in the research findings. Psychobiological mechanisms have not been elucidated nor objectively observed (Nater, Fischer, & Ehlert, 2011). At best, the HPA-dysfunction hypothesis of chronic pain remains speculative.

As cross-sectional, retrospective research methods are unable to elucidate directionality of causation there is a need to seriously consider and account for differences in the findings from longitudinal, prospective studies. One such study mentioned by Kaleycheva et al. (2021) was Raphael, Natelson, Janal, & Nayak's (2002) study of a large ( $N = 1312$ ) community sample pre-surveyed for pain and psychiatric symptoms prior to the 9/11 terrorist attack in New York on 11 September 2001. The women included in this investigation were screened for presence of fibromyalgia 6 months later. No increased incidence of fibromyalgia was found. Interestingly, the authors set this aside as evidence that there needs to be cumulative exposure to stressors as a risk factor. However, the authors contradict themselves when they note that 40% of patients with fibromyalgia report no prior exposure to stressors before the onset of their condition (Gonzalez, Baptista, Branco, & Ferreira, 2013). Furthermore, other prospective studies such as the detailed examination of ( $N = 676$ ) people with documented cases of childhood neglect or abuse were followed up (Raphael, Spatz Widom, & Lange, 2001). No correlation was found between prospectively assessed abuse (physical and sexual) and neglect. However, a disparity was found between the patients' retrospective self-reports of childhood victimisation. A significant relationship with unexplained pain symptoms was found but only for retrospective self-reports, not when assessed prospectively. In summary, the findings from longitudinal, prospective studies are challenging the findings from retrospective recalled data. They do not find a link between lifetime stressors and the development of fibromyalgia, suggesting a more nuanced relationship.

If lifetime stressors were hypothesised to be in part causative in the development of fibromyalgia, then it would not be unreasonable to assert that overcoming the consequences of such stressors and even trauma, such as post-traumatic stress responses, via appropriate evidenced-based psychotherapy would provide effective relief from not only the impact of trauma, but also the fibromyalgia symptoms and a return to good health and functioning. This is heartily desired by patients and is seductive to them. However, there is no objective evidence in the literature, for example, ability to return to employment or equivalent; loss of fibromyalgia diagnostic label; increase in physical activity and resumption of exercise via actigraphy and so forth, to support this. It is much more likely, and in keeping with the literature and clinical practice, that lifetime major stressors make it more plausible that the patient finds it much harder to cope with a debilitating medical condition and are perhaps more likely to seek support (Aaron et al., 1997).

For the above reasons, the possibility that the association this meta-analysis asserts is more complex and perhaps even an

artefact of the method of study used to explore it, rather than a real-world effect. Sadly, if left unchallenged, this has real-world consequences for patients. For example, projection onto patients of a seductive but unfounded, speculative hypothesis in part due to feelings of uselessness, hopelessness, helplessness, and lack of resilience to cope with uncertainty, witnessing ongoing suffering and ambiguity in society at large. This can result in what can be experienced as an assault on patient's sense of self which at worst, can cause harm, inertia, stigmatisation, and distress.

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