



Editorial comment

Editorial comment on Nina Kreddig's and Monika Hasenbring's study on pain anxiety and fear of (re) injury in patients with chronic back pain: Sex as a moderator



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In this issue of the *Scandinavian Journal of Pain*, Nina Kreddig and Monika Hasenbring report on a thought provoking study investigating whether there are sex differences in the association between pain anxiety, fear of (re)injury and pain intensity [1]. Based on theory and empirical evidence confirming anxiety and fear as distinct emotional phenomena, they make an explicit effort in trying to distinguish between the concepts of pain-related anxiety and fear of (re) injury. The authors use two well established self-report measures, the PASS and the TSK, as representatives for each respective concept. In a cross sectional analysis, they study whether the strength of the association of these measures with levels of pain differs between the sexes. In line with previous research, they find that, for men, level of pain-related anxiety but not fear of (re) injury was related to level of pain while for women, it was the opposite way around. These results evoke some important ideas for future studies. Important areas relate to operationalization and measurement of pain related anxiety and fear as well as further theoretical development stimulating parsimonious and falsifiable hypotheses to be tested in prospective designs.

The effort to distinguish between anxiety and fear has theoretical and possibly clinical advantages, but clarity in how to measure them is lacking. Indeed, since the concepts are closely related it may be a true challenge to develop questionnaires that clearly discriminate them. The differences between fear and anxiety have been confirmed by a variety of different empirical studies [2]. There is solid evidence that fear is mostly characterized by a proximate, specific threat and avoidance behavior, while anxiety is characterized by a more distal, unspecific, sense of threat, hypervigilance and worry. Better distinguishing between fear and anxiety in pain research may therefore give us new information on the possible differential impact of these emotions on the development of chronic pain, and potentially inform treatment. However, a major challenge will be to develop self-report measures that distinctly reflect these

constructs and that are not cross contaminated. As the authors themselves point out, while anxiety and fear may theoretically be regarded as distinct concepts, it is unclear whether available measures actually capture these constructs in sufficiently distinct ways.

Both the PASS and the TSK have been very useful in delineating pain related fear and anxiety, but they were not developed with the subtle, but possibly important, distinction between anxiety and fear in mind. Therefore, the PASS and TSK cover some different content but also show considerable overlap, not in the least when it comes to items probing avoidance beliefs and behaviors. As an example, consider the following items: 'When I feel pain I think that I might be seriously ill' (PASS) and 'I wouldn't have this much pain if there weren't something potentially dangerous going on in my body' (TSK). These items, as well as several other, show resemblance, and future studies aiming to tease apart the role of anxiety and fear in pain problems will therefore need to attend to the need for further development of measures with high construct validity for this purpose.

The field on sex differences in pain is challenging when it comes to developing theory and showing clinical utility. On the one hand, there is evidence on sex differences in pain sensitivity, analgesic responses, clinical presentation, experimental pain responses as well as coping [3] but on the other hand, most differences are small and of unclear clinical value. Explanations are found on biological, psychological as well as social levels of analysis, but there are as of yet no comprehensive models providing a coherent picture. When it comes to sex differences in the psychology of pain, there seem to be different ways in which men and women emotionally react to and cope with pain. Studies have focused on for example differences in pain catastrophizing and coping but mechanisms are poorly understood [4]. In addition, most studies are cross sectional, leading to obvious difficulties in establishing directions of effect. There is therefore also no clear picture on how to understand the differential role that anxiety and fear may play for pain in men and women, or on how this would translate to clinical application. There is a need for a model that could serve as a basis for clear hypotheses on how possible sex differences in pain-related emotion regulation could relate to a variety of different, and clinically relevant, outcomes.

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Kreddig and Hasenbring take an important first step in studying how sex differences may interact with pain-related anxious apprehension and fear and avoidance. Their study is an example of an effort to further probe how sex differences may influence the experience of, and adaptation to, chronic pain differentially for men and women. While it seems premature to speculate on how this could influence treatment their study evokes some important ideas for future studies that could eventually further refine our treatment options for patients with different characteristics.

Conflict of interest

None declared.

References

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