

SHORT REPORT

Anxiety and concerns related to the work situation during the second wave of the COVID-19 pandemic in >5000 patients with inflammatory rheumatic disease followed in the DANBIO registry

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To cite: Glintborg B, Jensen DV, Engel S, *et al*. Anxiety and concerns related to the work situation during the second wave of the COVID-19 pandemic in >5000 patients with inflammatory rheumatic disease followed in the DANBIO registry. *RMD Open* 2021;**7**:e001649. doi:10.1136/rmdopen-2021-001649

Received 28 February 2021
 Revised 12 April 2021
 Accepted 18 April 2021



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COVID-19 is a pandemic that has shattered the world, not only once, but with a second wave swiping across the continents. Patients with inflammatory rheumatic diseases (IRDs) have encountered widespread shielding (ie, stringent self-isolation) and poor quality of life (QoL).^{1–3}

Work obligations could potentially affect opportunities to self-isolate. The World Health Organization has expressed concerns that some workers may be at higher risk of developing severe COVID-19 illness because of age or pre-existing medical conditions.⁴ Despite being a topic on the political agenda, in social media and patient organisations, surprisingly little is known regarding the impact of the ongoing pandemic on anxiety and concerns related to the work situation, and in a review of the medical literature, we found no previous research publications regarding patients with IRD.

We performed a nationwide online survey in patients with IRD (rheumatoid arthritis (RA), psoriatic arthritis (PsA), axial spondyloarthritis (axSpA) and other)¹ routinely followed in the Danish DANBIO registry.⁵ In October–November 2020, patients were invited to answer questions regarding the impact of the second wave of the COVID-19 pandemic on the current work situation and

Key messages

What is already known about this subject?

- ▶ The ongoing COVID-19 pandemic has resulted in widespread shielding in patients with inflammatory rheumatic disease (IRD) due to fear of infection.
- ▶ Work obligations could potentially cause anxiety due to limited possibilities to self-isolate; however, this has only been explored to a limited degree.

What does this study add?

- ▶ In this nationwide study including >5000 patients with IRD, we demonstrated widespread concerns related to the work situation mainly in women, biologically treated and patients with poor quality of life.

How might this impact on clinical practice or future developments?

- ▶ Continuous awareness of the difficult balance between social distancing and work obligations in patients with IRD is important.

related concerns (see footnote in [figure 1](#)), treatment with disease-modifying antirheumatic agents (DMARDs), disease activity, educational level and comorbid diseases.

Demographic and clinical factors associated with work-related concerns were explored with multivariable logistic regression (mostly or completely agree vs other responses) including gender, age (<40/40–60/>60

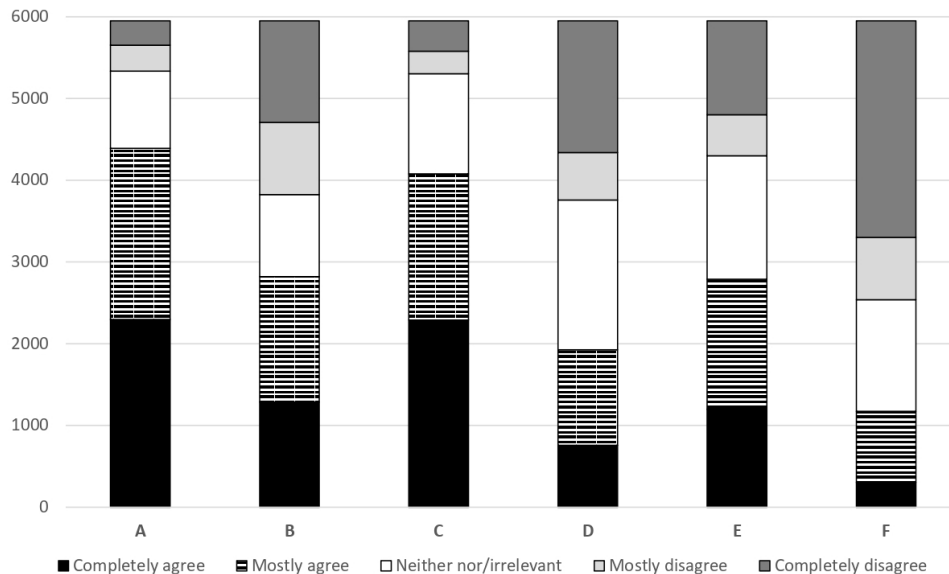


Figure 1 Concerns related to work situation in 5950 patients with inflammatory arthritis during the COVID-19 pandemic in November 2020. Questions: **A:** It is important for me to keep physical distance at my job. **B:** It is difficult for me to keep physical distance at my job. **C:** My workplace helped to make necessary interventions for me to safely tend my job. **D:** I fear that my arthritis condition increases my risk of COVID-19 infection at work more than others my age. **E:** Due to my arthritis condition I should take more precautions at work to avoid infection compared to others my age. **F:** I am concerned being in the work environment.

years), diagnosis (RA/PsA/AxSpA/other), educational level (higher/lower), other comorbidities (yes/no/missing), biological DMARD (bDMARD) treatment (yes/no) and health-related QoL (EQ-5D) (below/above median). Higher educational level was defined as further education for ≥ 2 years, whereas lower level included vocational training or no further education.

Among 14 758 respondents (38% of eligible patients), 5950 patients (40%) were working (60% full time/31% part time/9% self-employed), 61% were female, median age was 55 (IQR 47–60) years, 53% had RA/19% PsA/20% AxSpA/9% other IRD, 53% had higher educational level, 47% reported other comorbidities, 36% received bDMARDs, and self-reported EQ-5D was median 0.80 (IQR 0.74–0.86).

Self-reported concerns and anxiety regarding the current work situation were frequent (figure 1, panels A–F) (answers available in 97% of patients). Although 69% (4078/5950 patients) answered that their workplace had helped making arrangements for them to safely tend to their job, 22% (2820/5950) found it difficult (completely/mostly agree) to keep physical distance at work (figure 1, panel B), and 20% (1172/5950) were concerned being in the work environment (figure 1, panel F). Among patients concerned about the work environment, 94% found it important to keep physical distance at work, 75% found it difficult to keep distance, 63% found that their workplace had made necessary interventions, 75% feared that their arthritis increased risk of COVID-19 infection at work and 85% felt they should take more precautions than others their age.

In multivariable logistic regression analyses including respondents with complete data ($n=5878$), factors

associated with being concerned about being in the work environment were female gender (odds ratio (OR) (95% CI) 1.96 (1.68 to 2.28)), higher educational level (1.34 (1.17 to 1.54)), other comorbidities (yes vs no, 1.37 (1.19 to 1.58)), treatment with bDMARDs (1.46 (1.27 to 1.68)) and poorer EQ-5D (2.71 (2.35 to 3.13)) (all $p<0.001$). Diagnosis and age were without significance. Similar patterns were found for other work-related concerns (not shown).

Potentially, patients with higher education could be more concerned because their work is poorly suited for shielding (eg, working in close physical contact with others (teaching, healthcare, etc)) or they could be more sceptical in general. However, in order to understand the impact of educational level, information regarding specific working activities (eg, manual work, sector of employment) and working conditions such as possibilities to work remotely from home would have been of interest. This was not included in the questionnaire and we could not explore this further.

Understanding the impact of COVID-19 on occupational health has high priority,^{4 6 7} but has previously mainly been explored in certain occupational groups (eg, frontline employees with high SARS-CoV-19 exposure risk^{8 9}) or certain populations^{10–12} and not specifically in patients with RMD. In accordance with others, our study confirms high anxiety levels related to the work situation, mainly in women,¹¹ persons with poor health conditions^{9 12} and persons with higher education.⁷

In this study, we included a large cohort of well-characterised patients with IRD who were working during the second wave of the COVID-19 pandemic. Anxiety and concerns related to their work situation were frequent,

especially in women, patients receiving biological treatments, those with comorbidities and poor QoL. In the light of the ongoing pandemic and future waves, continuous awareness of the difficult balance between social distancing and work obligations is important.

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Acknowledgements We acknowledge all patients and all Danish Departments of Rheumatology contributing to the DANBIO registry. Thank you to Anne Pape and Mikkel Abildtoft, Zitelab, for the technical support and expertise during the development of online questionnaire.

Contributors Study conception and design: BG, DVJ, SE, MH. Acquisition of data: BG, DVJ, SE, NSK. Statistical analysis: BG, SHR, NSK. All authors contributed to the interpretation of the data. BG and MH wrote the manuscript. All authors critically revised the manuscript. All authors revised and approved the final manuscript to be published.

Funding This study was partly funded by an unrestricted grant from The Lundbeck Foundation (grant number R349-2020-629).

Competing interests BG: Research grants: AbbVie, BMS, Pfizer. OH: Research grants: AbbVie, Novartis, Pfizer. LT: Speakers fee: Speakers fee from AbbVie, Janssen, Roche, Novartis, Pfizer, MSD, BMS and GE. MO: Research grants: Abbvie, BMS, Celgene, Merck, Novartis; consultancy and/or speaker fees: Abbvie, BMS, Boehringer-Ingelheim, Celgene, Eli-Lilly, Hospira, Janssen, Merck, Novartis, Novo, Orion, Pfizer, Regeneron, Roche, Sandoz, Sanofi and UCB. RDO: Research grants: Abbvie; consultancy and/or speaker fees: Abbvie, BMS, Boehringer-Ingelheim, Eli-Lilly, Janssen, Merck, Novartis, Pfizer, Roche, Sanofi and UCB. AGL: Consultancy and/or speakers fees: AbbVie, Eli-Lilly, Janssen, MSD, Novartis, Pfizer and UCB. MLH: AbbVie, Biogen, BMS, Celtrion, Eli Lilly Denmark A/S, Janssen Biologics B.V, Lundbeck Fonden, MSD, Pfizer, Roche, Samsung Biopis, Sandoz. MLH chairs the steering committee of the Danish Rheumatology Quality Registry (DANBIO), which receives public funding from the hospital owners and funding from pharmaceutical companies. MLH co-chairs the EuroSpA research collaboration, which generates real-world evidence of treatment of psoriatic arthritis and axial spondylorthritis based on secondary data and is partly funded by Novartis.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

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