

### Work is more affected for people in rural areas



Geography plays a role in health and work outcomes.

#### INTRODUCTION

Spondyloarthritis (often shortened to SpA) is an umbrella term for several conditions that share many features and symptoms. These conditions include ankylosing spondylitis, psoriatic arthritis and reactive arthritis. Spondyloarthritis can be classified as axial or non-axial (peripheral), according to which regions in the body are affected: axial disease affects the spine, while peripheral disease affects other joints in the body, such as the hands, shoulders, knees or feet. Ankylosing spondylitis (often shortened to AS) is the most common type of axial spondyloarthritis. Ankylosing spondylitis mainly affects the spine and the sacroiliac joints (in the back part of the pelvis), causing back pain and stiffness. In advanced stages of the disease, new bone formation can cause parts of the joints to fuse in a fixed immobile position.

Spondyloarthritis can affect people's ability to work. It has been reported that up to 30% of people with axial spondyloarthritis have reduced work ability. Being able to work is not only important economically, but also has a positive impact on social and psychological health. It gives people status in society, as well as meaning and purpose in their lives. There is evidence that supportive work environments can help people to carry on working. However, not all workplaces are created equal, and in particular there are differences between work environments in rural (countryside) and urban (town and city) locations.

The ageing population is growing faster in rural areas Graham Parkhurst a and Charles Musselwhite a Centre for Transport & Society (CTS), and people are working to older ages. It is important to understand the relationship between rurality, health and work outcomes. This is to make sure that people with rheumatic disease are supported to live and work well.

#### WHAT DID THE AUTHORS HOPE TO FIND?

This research was inspired by patient representatives on the British Society for Rheumatology Biologics Register for Ankylosing Spondylitis (BSRBR-AS) strategy group. The representatives identified work and the impact of geography on health as key research priorities. The authors aimed to compare people with axial spondyloarthritis living in rural and urban areas of the UK and find out whether there were any differences in how severe their arthritis was. They also wanted to find out whether there were differences in how much their arthritis was affecting their ability to work.

#### WHO WAS STUDIED?

The study looked at 2,390 people from 83 rheumatology centres across the UK. Everyone had a confirmed diagnosis of axial spondyloarthritis (previously called ankylosing spondylitis).

#### HOW WAS THE STUDY CONDUCTED?

This was a sequential, explanatory mixed-method study. This means that results from the first phase of the study were explored further in the second phase. Different research methods were used in each phase.

In Phase 1 the authors looked at information gathered as part of the BSRBR-AS registry. The registry is a database collecting information about people with spondyloarthritis. Some of the information was collected by rheumatologists during clinic appointments, and some from people living with spondyloarthritis via postal questionnaires. The responses of people living in rural and urban areas were compared to see how active their disease was, how it affected their ability to work, and the effect of biologic medication (also called bDMARDs).

As the patient advisory group had suggested, ability to work emerged as an important issue in Phase 1. Therefore, the authors explored this in more detail in Phase 2. Thirty people from the registry living in rural and urban areas of the UK were interviewed by telephone. They were asked about how their spondyloarthritis affected their ability to work, and about how any work disability affected their quality of life. They were also asked about how their disease affected their choice of career and progression in their career, and what support they needed to work.

### WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The information from Phase 1 showed that people living in rural areas were older and more likely to work in physically demanding jobs that needed them to do lifting, standing, kneeling or squatting than people in urban settings. However, disease activity, physical function, medication use and quality of life were similar amongst people living in rural and urban settings. Of course, ability to work is affected by a range of things including age, gender, socio-economic factors, so the authors used statistical analysis to adjust for these factors. The study found that people with axial spondyloarthritis living in rural areas reported higher levels of something called *presenteeism*. This means time at work where they were less productive than usual. People in rural areas were also more likely to have reduced ability to work. Among people prescribed biologic medications, there was no difference in clinical response to their treatment. However, rural people on biologics reported more difficulties with work than urban people. The higher levels of disability for work were explained by individual differences in disease activity, fatigue, physical function, and type of job.

In Phase 2, many of the people interviewed highlighted the importance of being able to work. Being able to work was particularly important in terms of self-identity and social interactions, as well as for financial reasons. It was clear that ability to work was maximised when there was some flexibility about what, when and how work tasks could be done. Most interviewees had already made adaptations in how they travelled to their place of work. Many people reported variability in the support that they received from their employers, and some felt that healthcare professionals could do more to discuss work issues.

### ARE THESE FINDINGS NEW?

Yes. This is the first paper to demonstrate that people with axial spondyloarthritis living in rural areas report a greater impact of their condition on their ability to work.

### WHAT ARE THE LIMITATIONS OF THE STUDY?

These were exploratory analyses, prioritised by patient representatives, which looked at a number of different health and work factors. The findings suggest that both work factors and healthcare have different effects for people who live in rural or urban locations. However, it is difficult to be clear about the precise role of individual factors. This study does not have the statistical power to analyse these effects. It would take a very large study (or collection of studies with similar information collected) to do so.

### WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

The ability to work is important to people with axial spondyloarthritis, and geography plays a role in health and work outcomes. These are key messages to spread to healthcare professionals so that they can support their patients to work well. Most employers will have very few employees with long-term rheumatic disease. Doctors can also help educate and support employers to enable flexibility at work.

The authors suggest that future EULAR recommendations should include support to work well as a target to optimise quality of life in patients with axial spondyloarthritis. More studies are needed to understand the effect of where people live on health and work.

### WHAT DOES THIS MEAN FOR ME?

If you have axial spondyloarthritis and live in a rural area, you may face additional difficulties with remaining in paid work. You should seek support from your employer and healthcare team, and ask for as much flexibility as possible within your work role. This study will help raise awareness of work problems amongst doctors and employers

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