

Very Early Intervention Is Crucial to Improve Work Outcome in Patients with Rheumatoid Arthritis



Work disability is a serious consequence of rheumatoid arthritis (RA). An extensive review concluded that about one-third of patients with RA stopped working within 2 to 3 years after disease onset and that 50% to 60% could be unable to work after 10 to 15 years¹. Some recent studies indicate a decline in work disability rates in long-standing RA^{2,3}. Work disability is a great burden for both the individual and society. The patients may experience loss of social role and lower self-esteem and have both reduced income and more expenses. A large part of the arthritis-related societal costs are directly derived from work disability⁴.

Previous studies of work cessation have mainly focused on permanent work disability. Investigations of the sick leave that usually precedes permanent work disability are scarcer. In this issue of *The Journal* Björk, *et al* present a report of sick leave 3 years before and 3 years after diagnosis in relation to referents in the Swedish TIRA project⁵. They report that about half the patients were on sick leave 6 months before diagnosis. The proportion of patients not working did not decrease with time, but after 3 years almost one-third had received disability pension. A disadvantage is that only 120/178 eligible patients took part in the study, although dropouts did not differ regarding demographics and disease state variables at study start. Another limitation of the study is that the registry data obtained from the Swedish social insurance agency did not include sick leave periods shorter than 14 days or for a period even shorter than 28 days. As noted by the authors, the figures obtained for total sick leave are nevertheless mainly in keeping with previous similar studies.

Sick leave rates are influenced by the social system and health policy in different countries. Variations in prevalence figures may also be due to differences in study populations and methodology. A major strength of the study by Björk, *et al* is the inclusion of referents. This should give more reliable and valid results and facilitate comparisons between international studies. A reference population also controls for changes in health regulations over time in longitudinal studies.

The prevalence figures of work loss obtained in different studies may to some extent depend on the way the information has been collected. Björk, *et al* use registry data, which should give more reliable results compared to information obtained from questionnaires or interviews. Recall bias, a possible source of error for self-reported data, is avoided. The variation in results obtained by different data collection methods is well illustrated by a previous TIRA study, where the corresponding figure for self-reported sick leave was 28%⁶.

An important question for interpretation of results from different studies is whether absence from work is attributed to arthritis or not. The definition in the present study is sick leave regardless of cause. Allaire, *et al*³ have shown that at least during the first 3 years of RA there was quite a substantial difference in occurrence of work cessation due to arthritis (14%) or for any reason (23%). In their earlier study⁶ the TIRA group used the definition sick leave due to illness, which may be an additional explanation for the higher sick leave rates in this study.

A key finding in the study by Björk, *et al* was that sick leave before diagnosis was a strong predictor of sick leave after 3 years. Others have also reported similar results in an even earlier stage of the disease. A recent survey showed that sick leave in the 12 months before entering an early arthritis study was the main predictor of permanent work disability⁷. These studies underline the need of very early intervention. Instruments such as the work instability scale (WIS) and the work limitation scale (WLS) may become useful to identify patients at risk of job loss at an early stage⁸.

Traditional risk factors identified in this study were disability, type of work, and age⁹. A caution is that type of work was available for only 56% of the patients. Gender was not a significant risk factor. Previous findings regarding the predictive value of gender have been inconsistent⁹. Björk, *et al* also investigated differences by gender in factors related to work status. Their results suggest that type of work and disease activity influenced work capacity more in

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men. Dissimilarity in sociodemographic, work-related, and personal factors has also been reported by others¹⁰, implying that a patient's gender should be taken into account to target interventions. However, this field needs much more exploration. The predictive model could explain 44% of the sick leave after 3 years. The relatively low explanatory power underlines that assessment of work ability is complex and if possible a broad spectrum of potential risk factors should be considered. Although sociodemographic and disease-related features are important, work-related factors may be easier to modify. Studies on this issue have identified a number of aspects, for instance, inflexible hours, limited autonomy or control over pace of work, lack of support from co-workers and management, commuting difficulty, and attitude towards work^{9,11}. Work-related risk factors are already obvious in early arthritis¹². Positive effects of adjustment of work conditions and vocational counselling have been reported^{11,13,14}. Also in this context early intervention is required in order to prevent work cessation. Allaire, *et al* have shown that vocational rehabilitation was most efficient if the patient was still employed¹⁵.

Behavioral coping style is another potentially modifiable factor having major influence on the ability to stay employed¹³. Cognitive interventions to increase active coping skills in patients with early RA have been successful, but a possible effect of such therapy on work outcome has so far not been tested¹⁶. Also, in this case, interventions should start as early as possible. In patients attending an early arthritis clinic a passive coping strategy towards limitations was associated with job loss¹².

Björk, *et al* conclude that better clinical status did not result in fewer sick leaves among their patients, a finding in accord with others¹⁷. One explanation could be that in spite of efficient pharmacological treatment, few patients achieve remission. Some recent studies have shown that remission or at least minimal disease activity is required for substantial reduction of work problems^{18,19}.

From the employer's perspective, work problems may cause reduced productivity. Economic evaluation of productivity loss includes assessment of 2 main factors: the amount of time not at work (absenteeism) and the time of impaired performance while at work (presenteeism). Evaluation of presenteeism should include assessment of quality of life for the worker. Some instruments to measure one or the other aspect of worker productivity have been developed. However, a recent review has shown that all evaluated instruments had some shortcomings, especially regarding responsiveness²⁰. It is very difficult to develop instruments that capture the whole concept of worker productivity and also generate results that could be used for calculation of costs.

Another important matter to take into account is productivity loss in unemployed work, such as household tasks and care for children or others. A recent report showed that costs

resulting from loss of household productivity were higher than those resulting from loss of paid employment²¹.

A study has indicated a positive influence of biological agents on employment rates in patients with longstanding RA²². Current research has paid growing attention to this issue. A main problem is that the patients included in present investigations are taking part in short-term clinical trials, where the full effect of a positive treatment response on work habits may not become evident. In this context a new outcome variable has been introduced. A patient is defined as employable if he/she is currently actively employed or feels well enough to work if a job were available. This concept has not been fully validated, but preliminary data support the theory that actual employment parallels employability²³. Two early RA studies have compared patients receiving methotrexate with or without addition of anti-tumor necrosis factor (anti-TNF) therapy for about one year^{24,25}. One of the studies found that patients receiving the anti-TNF agent had fewer lost work days and an increased likelihood of maintaining employability²⁴, and the other study reported less working time lost and improved WIS scores⁸ in such patients²⁵. Han, *et al* showed that patients with short disease duration were more likely to show improved employability after positive treatment response than patients with long-standing RA²³. Longer-term clinical studies are now necessary to establish the value of biologic treatment in this context.

The literature, including the study by Björk, *et al*, provides solid evidence that very early intervention is essential to prevent work loss in patients with RA. It is a very challenging task to develop new methods to identify patients at risk of job loss and to effectively target interventions from many different aspects.

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