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Fitness for Work in Physical Medicine and Rehabilitation and Rheumatological Conditions: A Narrative Review

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Joshua A. Jogie [1], Victor Coombs [2], Wayne Ramgoolam [3, 4], Rondon Ramlal [5], Sai Sapna Anmolsingh [6], Ansara Mohammed [7], David King [8], Neera Parsan [8], Rykel Rojas [8], Bryan Bhagan [9], Analisa Logie [8], Aaron Sirju [8], Keisha Gangaram [10]

1. Occupational Health Unit, St. James Medical Complex, Port of Spain, TTO 2. Occupational Medicine, Global Management, Environment Safety & Health Limited, San Fernando, TTO 3. Occupational Medicine, Occupational Safety and Health Authority, San Fernando, TTO 4. Occupational Medicine Unit, San Fernando General Hospital, San Fernando, TTO 5. Industrial Medicine Unit, Eric Williams Medical Sciences Complex, Champs Fleur, TTO 6. Staff Health Unit, Eric Williams Medical Sciences Complex, Champs Fleur, TTO 7. Staff Clinic, St. Ann's Psychiatric Hospital, St. Ann's, TTO 8. Internal Medicine, St. James Medical Complex, Port of Spain, TTO 9. Internal Medicine, Port of Spain General Hospital, Port of Spain, TTO 10. Public Health, North West Regional Health Authority, Port of Spain, TTO

Corresponding author: Joshua A. Jogie, dr.joshua.jogie@gmail.com

Abstract

Physical medicine and rehabilitation (PMR) and rheumatological conditions are common causes of pain, disability, reduced work capacity, and absence from employment. Selected conditions considered in this review include osteoarthritis, inflammatory arthritis, low back pain and chronic musculoskeletal pain, systemic rheumatic disease, and fibromyalgia. Their effect on work varies according to disease severity, functional impairment, treatment response, job demands, and workplace factors. Fitness-for-work assessment therefore requires more than confirmation of a diagnosis. It requires an assessment of what the worker can safely and reliably do in relation to the physical, cognitive, and environmental demands of the job.

This narrative review examines the main principles used to assess fitness for work in workers with selected PMR and rheumatological conditions. It discusses clinical assessment, functional capacity, disease activity, pain, fatigue, mobility, strength, dexterity, and the effect of treatment on work performance. It also considers job demands, including manual handling, repetitive activity, prolonged standing or sitting, driving, shift work, and safety-critical duties. Particular attention is given to reasonable workplace adjustments, temporary restrictions, graded return to work, rehabilitation, and communication between the worker, treating clinicians, occupational health services, and the employer.

Fitness for work should be based on function and risk rather than diagnosis alone. A worker may remain fit for employment despite persistent symptoms if the work can be performed safely with appropriate adjustments. In contrast, temporary restriction may be required when symptoms, functional loss, treatment effects, or the demands of the job create an unacceptable risk to the worker or others. Decisions should be reviewed as the condition and functional capacity change.

A coordinated approach between PMR, rheumatology, occupational health, physiotherapy, occupational therapy, and the workplace can support continued employment and safe return to work. Fitness-for-work assessment should remain individualized, function-based, and linked to the actual requirements of the worker's job.

Categories: Occupational Health, Physical Medicine & Rehabilitation, Rheumatology
Keywords: fitness for work, occupational health, physical medicine and rehabilitation, return to work, rheumatology

Introduction And Background

Work is a major part of adult life. It provides income, social participation, routine, and a sense of independence. Illness can affect work long before it causes complete disability. Rheumatic and musculoskeletal diseases are important examples because they often begin or remain active during working age. They may reduce strength, mobility, endurance, dexterity, concentration, and tolerance of physical activity and can also cause pain, fatigue, stiffness, sleep disturbance, and variable symptoms. Maintaining healthy and sustainable employment is therefore an important outcome of care for people with rheumatic and musculoskeletal disease [1,2].

Fitness for work is not determined by diagnosis alone. It depends on the relationship between a worker's health and functional capacity and the demands of the job. A person with rheumatoid arthritis (RA) may be able to perform sedentary administrative work but may have difficulty with repetitive gripping, heavy lifting,

or prolonged manual tasks. A person with low back pain may remain fit for work if lifting demands can be reduced, while the same symptoms may prevent safe performance of a job that involves frequent manual handling. Mild impairment can become important in safety-critical work when duties require rapid movement, sustained concentration, driving, work at height, or reliable emergency response. The practical question is whether the worker can perform the required duties safely and reliably, with or without reasonable adjustments.

Work ability also exists on a spectrum. A worker may remain at work but perform at a reduced level because of pain, stiffness, fatigue, or reduced mobility. Work instability can develop when functional ability and job demands become increasingly mismatched. Functional assessment can include history, physical examination, validated questionnaires, observation of activity, and, in selected cases, functional capacity evaluation (FCE). Questionnaires and performance tests provide different information, and no single physical test defines overall work capacity. The Rheumatoid Arthritis Work Instability Scale was developed to identify mismatch between capacity and work demands [3-5].

The European Alliance of Associations for Rheumatology guidance provides broad principles for supporting healthy and sustainable work participation in rheumatic and musculoskeletal disease [1]. Practical advice still requires translation of symptoms and functional limitations into job-specific restrictions, adjustments, rehabilitation, and review. This narrative review therefore focuses on selected conditions for which work-related evidence was identified: RA, osteoarthritis (OA), low back pain and chronic musculoskeletal pain, axial spondyloarthritis (axSpA), psoriatic arthritis (PsA), systemic lupus erythematosus (SLE), and fibromyalgia. It is not intended to be an exhaustive review of every physical medicine and rehabilitation (PMR) diagnosis.

Methods

The aim of this narrative review was to examine fitness for work in selected PMR and rheumatological conditions. The review focused on how disease, functional impairment, job demands, treatment, and workplace factors affect work capacity. It also aimed to describe practical approaches to functional assessment, workplace adjustment, vocational rehabilitation, and return-to-work planning.

A narrative review approach was used because the topic covers several clinical conditions and a wide range of occupational outcomes. A formal systematic review or meta-analysis was not performed. Relevant studies were identified through PubMed searches performed during manuscript preparation and updated through September 2026. Search terms were used alone and in combination and included 'fitness for work,' 'work ability,' 'work disability,' 'return to work,' 'work productivity,' 'presenteeism,' 'vocational rehabilitation,' 'functional capacity evaluation,' 'occupational rehabilitation,' 'rheumatoid arthritis,' 'osteoarthritis,' 'low back pain,' 'chronic musculoskeletal pain,' 'axial spondyloarthritis,' 'psoriatic arthritis,' 'systemic lupus erythematosus,' 'fibromyalgia,' 'physical medicine and rehabilitation,' 'rheumatology,' and 'occupational health.' Reference lists of relevant PubMed-indexed reviews were also considered to identify additional studies of clinical importance.

Studies were selected based on their relevance to work ability, functional limitation, sickness absence, work productivity, return to work, workplace intervention, or vocational rehabilitation in PMR and rheumatological conditions. Priority was given to systematic reviews, meta-analyses, randomized controlled trials, cohort studies, and studies that examined clinically useful measures of work function. Studies were also selected when they provided information on specific workplace barriers or interventions. Articles that focused only on disease diagnosis or treatment without a clear relationship to work function were not prioritized. Only PubMed-indexed literature was used for the references included in this review.

The final cited evidence base comprised 47 publications. Study selection was based on relevance to the clinical aims of the paper rather than on a predefined systematic screening process. No formal risk-of-bias tool or quantitative synthesis was applied. The evidence was synthesized descriptively to identify common principles that can guide fitness-for-work assessment.

Review

Condition-specific work outcomes

RA illustrates the difference between disease control and work ability. RA can affect grip, hand dexterity, upper-limb function, mobility, endurance, and general energy. In a five-year early RA cohort, manual work and worse baseline functional disability were important predictors of leaving work because of RA [6]. A large Swedish inception cohort found that baseline work ability, higher Health Assessment Questionnaire scores, greater disease activity, older age, and lower education were associated with more work days lost [7]. In another early RA cohort, pain and low vitality predicted earlier work disability, while disability and disease activity were associated with later benefit claims [8].

OA often affects weight-bearing joints or the hands and can interfere with standing, walking, stair use, kneeling, lifting, and repetitive grip. A review of knee OA found evidence of work disability and emphasized

assessment of work limitations rather than reliance on radiographic or diagnostic findings alone [9]. Physically intensive work, moderate-to-severe pain, comorbidity, and low co-worker support can affect work participation [10]. A systematic review and meta-analysis of lower-limb OA found poorer employment outcomes than in controls, including greater absenteeism, presenteeism, and reduced functional capacity [11].

Low back pain is a frequent cause of sickness absence. A systematic review and meta-analysis found that return-to-work rates increased substantially over time, while a smaller group remained absent and became more vulnerable to long-term work disability [12]. Return-to-work interventions for subacute low back pain can reduce absence and improve work resumption in selected populations [13]. Positive expectations about return to work were independently associated with later return to work in an individual participant data meta-analysis [14].

AxSpA commonly develops during working life. Pain, stiffness, reduced spinal mobility, fatigue, and reduced physical function can affect attendance and productivity. High disease activity, physically demanding work, poor function, and impaired spinal mobility are associated with adverse work outcomes [15,16]. Treatment that improves disease activity can improve work productivity, although job demands and workplace barriers remain relevant [16,17].

PsA can combine peripheral joint disease, enthesitis, axial symptoms, skin disease, pain, and fatigue. These features can affect manual work as well as sedentary work that requires sustained posture or concentration. Work productivity impairment, particularly presenteeism, is substantial in active PsA, and productivity can improve after biologic or targeted synthetic disease-modifying therapy [18].

Systemic rheumatic disease can affect work through symptoms that are less visible on physical examination. A systematic review reported substantial levels of work disability among people with SLE [19]. Fatigue is particularly relevant because it can limit sustained activity even when strength and joint movement appear acceptable during examination and has been associated with work loss, presenteeism, and impaired productivity [20].

Fibromyalgia presents a different problem because work limitation may be substantial despite the absence of focal structural damage. Widespread pain, fatigue, sleep disturbance, and cognitive symptoms can reduce work ability. A review found that symptom severity and physically demanding tasks were important factors, while support from managers and colleagues could help people remain at work [21].

Workplace participation and return-to-work evidence

Return to work is usually a process rather than a single event. A worker does not always need complete symptom resolution before returning. Temporary restrictions can allow safe work while recovery continues, provided the restriction is linked to a functional problem and has a review date.

A randomized trial of a participatory return-to-work program for workers with musculoskeletal disorders found faster sustainable return to work after the early follow-up period when workers took part in a structured plan to identify barriers and suitable work [22]. Work-focused multidisciplinary rehabilitation has also been studied in chronic musculoskeletal disorders. Some trials have shown benefits for occupational participation, while others show that adding work-related components without sufficient employer or workplace involvement may not improve all outcomes [23,24]. The findings support connecting rehabilitation to the worker's actual job and workplace barriers.

Clinical approach to fitness-for-work assessment

Fitness for work should be assessed by comparing the worker's functional capacity with the demands of the job. The diagnosis provides clinical context, but it does not determine fitness by itself. In RA, physical job demands and reduced functional capacity are stronger predictors of work disability than many biomedical measures. Work disability is therefore better understood as a mismatch between the worker's abilities and the requirements of the job [25]. Workplace factors also influence this relationship. Workstation modification, commuting difficulty, family support, and the worker's ability to discuss the condition at work have been associated with work outcomes in RA [26].

The assessment should identify the essential tasks of the job. These may include lifting, carrying, pushing, pulling, standing, walking, climbing, kneeling, repetitive hand use, driving, or prolonged sitting. The frequency and duration of each task also matter. A person may be able to lift a load once during examination but may not be able to repeat the task throughout a shift. The clinician should also consider shift length, night work, access to rest periods, environmental exposures, travel, and safety-critical duties.

A useful fitness-for-work assessment should document diagnosis, current disease activity, symptoms, treatment, adverse effects, functional limitations, prognosis, and expected duration of impairment. The examination should focus on functions relevant to the job, including range of movement, muscle strength,

grip, dexterity, gait, balance, endurance, and tolerance of sustained posture. The worker's own description of difficult tasks is also important.

Figure *1* summarizes how fitness-for-work decisions should move from diagnosis to functional capacity, job demands, risk, and review.

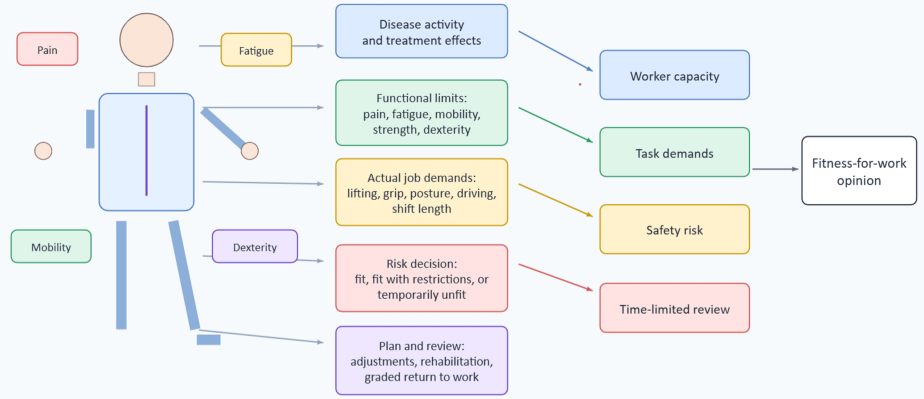


FIGURE 1: Function-Based Fitness-for-Work Framework

The body represents the worker. The surrounding labels show common physical medicine and rehabilitation and rheumatological symptoms or impairments. Arrows show the pathway from clinical status to function, job demands, risk, and review.

Figure created in Microsoft PowerPoint (Microsoft Corporation, Redmond, WA, USA) using native shapes, text boxes, and line work.

Inflammatory arthritis and work capacity

RA can affect work through pain, morning stiffness, fatigue, reduced grip strength, impaired dexterity, joint deformity, and reduced endurance. Manual workers may have difficulty with forceful or repetitive hand movements, lifting, carrying, or prolonged standing. Office workers may also experience problems with keyboard use, prolonged sitting, commuting, and fatigue.

Work-related factors are potentially modifiable. Vocational rehabilitation provided before job loss has been shown to delay job loss in people with rheumatic disease [27]. However, not every workplace intervention produces a measurable benefit. A randomized trial of integrated workplace care in workers with RA did not show significant improvement in productivity loss after 12 months [28]. These findings suggest that workplace interventions should be targeted to workers with clear functional difficulties or substantial risk of work loss rather than applied in the same way to all workers.

Occupational therapy has an important role in this process. The Work and Inflammatory Arthritis (WORK-IA) feasibility trial used individualized job-retention vocational rehabilitation, including work assessment, activity planning, ergonomics, fatigue management, assistive technology, workplace modification, employer liaison, and advice on disclosure and employment support [29]. The larger WORKWELL randomized trial further evaluated structured occupational therapy-led job-retention rehabilitation for workers with inflammatory arthritis [30].

Osteoarthritis

OA commonly affects the knees, hips, hands, and spine. Its effect on work depends strongly on the joint involved and the physical demands of the occupation. Knee or hip OA may reduce tolerance of walking, standing, stairs, ladders, squatting, kneeling, and load carrying. Hand OA may impair grip, pinch strength, fine manipulation, and repetitive tool use.

Assessment should focus on pain during activity, range of movement, strength, stability, walking tolerance, and the ability to repeat relevant tasks. Radiographic severity should not be used as the sole measure of work ability. The Work Limitations Questionnaire has demonstrated reliability and validity in employed people with OA and can identify limitations related to pain, stiffness, function, and work productivity [31].

Adjustments should address the task producing the greatest functional load. Examples include reducing prolonged standing, limiting kneeling or repetitive stair climbing, modifying manual handling, providing seating, changing workstation design, or allowing alternation between sitting and standing. Restrictions should remain specific. A recommendation such as 'avoid kneeling and squatting for four weeks' is more

useful than 'light duties.'

Low back pain and chronic musculoskeletal pain

Low back pain is a frequent cause of sickness absence, but complete symptom resolution is not always required before return to work. Workplace interventions can improve pain, disability, fear avoidance, and some measures of quality of life [32]. In workers with subacute low back pain, a structured workplace intervention involving workplace assessment, modification, and case management shortened the median time to return to work in one randomized trial [33]. A multinational cohort also found that workplace adaptation was associated with earlier return to work in workers with prolonged sickness absence due to low back pain [34].

The aim should therefore be safe restoration of activity rather than prolonged avoidance of activity. Temporary changes can include reduced lifting, avoidance of repeated bending or twisting, limits on sustained static posture, increased opportunities to change position, and a gradual increase in working hours. The restriction should reflect the worker's actual capacity and should be reviewed as function improves.

Chronic musculoskeletal pain requires a broader approach. Pain intensity does not fully explain work ability. Workers who continue employment despite chronic pain can have reduced functional capacity, but personal and workplace factors also influence performance [35,36]. Multidisciplinary rehabilitation may support earlier partial return to work, although more intensive treatment is not always superior to a brief intervention for long-term full-time return to work [37]. Return-to-work outcomes are also influenced by duration of sickness absence, psychological factors, beliefs about pain, and workplace support [38].

FCE may provide additional information when the physical requirements of the job are complex or when there is uncertainty about capacity. FCE should support, rather than replace, clinical judgment. Reviews emphasize that results should be interpreted against actual job requirements [39]. In a cohort of workers with musculoskeletal disorders, an FCE indicating that capacity matched job demands was associated with substantially greater odds of return to work [40].

Axial spondyloarthritis

AxSpA usually develops during working age. Pain, spinal stiffness, reduced mobility, fatigue, and impaired endurance may interfere with prolonged sitting, manual work, driving, bending, and jobs that require rapid movement. Long-term data showed that lower disease activity and stronger clinical responses were associated with fewer days affected by absenteeism and presenteeism [41].

Fitness assessment should include spinal and hip mobility, pain, fatigue, functional ability, treatment response, and the demands of sustained posture. Workers with sedentary jobs may benefit from regular movement and workstation modification. Those performing physical work may require temporary reductions in lifting, prolonged bending, or other high-load tasks during active disease.

Systemic lupus erythematosus

SLE can affect work through musculoskeletal symptoms, fatigue, organ involvement, neurocognitive symptoms, and treatment effects. These limitations may not be apparent from a short physical examination. In a large SLE cohort, almost half of those employed at diagnosis experienced work loss during follow-up. Severe disease activity and organ damage were associated with worse employment outcomes. Among those who remained employed, fatigue, neurocognitive symptoms, and musculoskeletal symptoms were important contributors to impaired productivity [42].

Assessment should therefore extend beyond joint examination. The clinician should ask about fatigue across the working day, concentration, memory, physical endurance, and recovery between shifts. Where appropriate, temporary changes to hours, workload, shift patterns, or environmental exposures may be useful. Decisions should be reviewed when disease activity or treatment changes.

Psoriatic arthritis

PsA is variable because peripheral arthritis, axial disease, enthesitis, dactylitis, and skin involvement may coexist. A large real-world study found that several manifestations of PsA were independently associated with worse physical function and work productivity [43]. Work productivity has also improved after biologic or targeted synthetic disease-modifying treatment in both synthesized evidence and randomized trial data [18,44]. Fitness decisions should therefore be reviewed after effective treatment rather than treating restrictions as permanent by default.

Treatment effects and fitness for work

Treatment can change occupational capacity and should be reviewed alongside symptoms, functional status,

and job demands. In axSpA and PsA, improved disease control has been associated with improved work productivity [17,18,41,44]. This evidence supports reassessment after treatment changes. The reviewed literature did not provide a consistent basis for drug-specific rules on driving, machinery, infection exposure, vaccination, or shift timing, so these issues require individualized clinical assessment and relevant jurisdiction-specific guidance rather than a universal rule within this review.

Fibromyalgia and persistent pain

Fibromyalgia illustrates why work fitness cannot be judged from structural pathology alone. Widespread pain, fatigue, sleep disturbance, cognitive symptoms, and reduced activity tolerance may produce substantial impairment despite normal imaging or the absence of focal neurological deficits.

Functional status appears more useful than diagnosis alone when assessing work disability in fibromyalgia. In a large cohort, functional measures were among the strongest predictors of disability status [45]. Another study found that workers receiving disability benefits had greater symptom severity and were more likely to have previously worked in physically demanding occupations than workers who remained employed [46].

The assessment should focus on sustained function. Questions should address the number of hours the person can work, whether performance deteriorates during the shift, the effect of repetitive activity, sleep quality, cognitive symptoms, and recovery after work. A graded plan, pacing, task variation, ergonomic changes, and adjustment of working hours may be more appropriate than complete work withdrawal in selected cases.

Work-related assessment tools

Table *1* summarizes work-related assessment tools supported by the cited evidence.

Tool	What it measures	Condition/use
Functional capacity evaluation (FCE)	Performance on physical work-related tasks such as lifting, carrying, pushing, pulling, standing, walking, and repetitive handling [3,4]	Musculoskeletal conditions when physical job requirements are complex or capacity is uncertain [39,40]
Rheumatoid Arthritis Work Instability Scale (RA-WIS)	Mismatch between a worker's functional ability and job demands; risk of work instability [5]	Rheumatoid arthritis [5]
Work Limitations Questionnaire (WLQ)	Health-related limitations in performing job roles and work productivity [31]	Employed people with osteoarthritis in the cited validation study [31]

TABLE 1: Work-Related Assessment Tools

Workplace adjustment and return-to-work planning

Restrictions should describe function rather than diagnosis. The employer usually needs to know what the worker can and cannot safely do, not the full medical history. A useful recommendation might specify a lifting limit, reduced standing time, avoidance of repetitive gripping, or temporary exclusion from climbing. Each restriction should have a proposed duration and review date.

Graded return to work can increase hours, task complexity, or physical load in stages. It also provides information about function in the real workplace. Persistent pain after occupational injury is associated with poorer employment outcomes and longer periods of work absence, which supports early attention to ongoing symptoms and work barriers [47].

The common principle across these conditions is that restrictions should be proportional to risk. Unnecessary restriction may contribute to prolonged work absence, while inadequate restriction may expose the worker or others to risk. Safety-critical jobs require particular care because the consequences of impaired mobility, cognition, alertness, or reaction time may be greater.

Table *2* summarizes the main considerations for common conditions.

Condition	Main work-related limitations	Key assessment areas	Possible workplace measures
Rheumatoid arthritis	Hand pain, reduced grip, stiffness, fatigue, reduced mobility, and difficulty with manual tasks [25,26]	Disease activity, dexterity, grip, joint function, endurance, and work instability [25,26]	Ergonomic equipment, reduced repetitive hand use, modified manual handling, rest periods, and vocational rehabilitation where required [27-30]
Osteoarthritis	Pain with loading, walking, standing, stairs, kneeling, or repetitive grip [31]	Joint-specific function, mobility, strength, pain during activity, and tolerance of repeated tasks [31]	Reduced kneeling or stair use, seating, task rotation, and modification of manual handling or workstation demands [31]
Low back pain	Difficulty with lifting, bending, prolonged sitting or standing, and repeated physical loading [32-34]	Neurological status, spinal mobility, lifting capacity, functional tolerance, and psychosocial or workplace barriers [32-34,39,40]	Temporary lifting limits, posture changes, ergonomic modification, workplace adaptation, and graded return to duties [32-34]
Axial spondyloarthritis	Spinal pain and stiffness, fatigue, reduced mobility, impaired endurance, and difficulty with sustained posture [41]	Spinal and hip mobility, posture tolerance, fatigue, functional ability, and disease activity [41]	Regular movement breaks, workstation adjustment, and reduced sustained bending or heavy physical loading during active disease [41]
Psoriatic arthritis	Peripheral or axial pain, enthesitis, dactylitis, fatigue, and reduced physical function [43,44]	Pattern and severity of joint involvement, dexterity, mobility, disease activity, and treatment response [43,44]	Task-specific modification, reduced repetitive activity, temporary physical restrictions, and reassessment after treatment response [43,44]
Systemic lupus erythematosus	Fatigue, musculoskeletal symptoms, cognitive problems, systemic disease, and reduced productivity [42]	Disease activity, organ involvement, fatigue, cognition, musculoskeletal function, and treatment effects [42]	Modified hours, rest periods, reduced workload, temporary shift changes, and review as disease activity changes [42]
Fibromyalgia/chronic pain	Widespread pain, fatigue, reduced endurance, cognitive symptoms, difficulty sustaining work activity, and greater difficulty in physically demanding work [35,36,45,46]	Sustained functional capacity, sleep, pain severity, pacing, psychosocial factors, and work ability [35,36,45,46]	Graded hours, pacing, task variation, ergonomic changes, rehabilitation, and regular review of functional progress [37,38,45,46]

TABLE 2: Comparison of Fitness-for-Work Considerations in Common Physical Medicine and Rehabilitation and Rheumatological Conditions

Source: Original table created by the authors based on the literature cited within the table.

Limitations

The evidence on fitness for work in selected PMR and rheumatological conditions has several limitations. First, work outcomes are defined differently between studies. Some studies measure employment or disability pension, while others measure sickness absence, return to work, work instability, or presenteeism. These outcomes are related but not interchangeable.

Second, occupational demands differ widely. Evidence from office workers may not apply directly to construction, healthcare, transport, manufacturing, or other physically demanding work. National differences in employment law, social security systems, certification processes, access to occupational health services, and workplace accommodations also affect work outcomes. The included evidence is largely derived from Europe and North America, and Caribbean-specific evidence was not represented in the cited studies. Application in Trinidad and Tobago, the wider Caribbean, and other settings with different legal or occupational-health systems therefore requires local interpretation.

Third, much of the evidence is observational. Associations between disease severity, workplace factors, and employment do not prove causation. Intervention studies also show mixed results. Vocational rehabilitation can reduce job loss in some populations [27], while other integrated workplace interventions have not demonstrated clear improvement in productivity [28]. FCE provides useful objective information, but no test reproduces every physical, cognitive, and environmental demand of a real working day [39,40].

Finally, this paper is a narrative review rather than a systematic review. PubMed was the principal database, and no formal risk-of-bias assessment or quantitative meta-analysis was performed. Conditions such as neurorehabilitation disorders, isolated neck pain, upper-limb soft tissue disorders, gout, and osteoporosis were outside the selected evidence scope of this review and require separate review.

Conclusions

Fitness for work in selected PMR and rheumatological conditions should be based on function, risk, and the demands of the job rather than diagnosis alone. Pain, fatigue, mobility, strength, dexterity, endurance, cognition, disease activity, treatment effects, and workplace factors may all influence work ability. The same condition can have very different effects in different occupations. Assessment should therefore identify the worker's functional limits and compare them with the essential duties of the job. Temporary restrictions, workplace adjustments, graded return to work, and rehabilitation can help many workers remain in employment or return safely after illness. Restrictions should be specific, proportionate, and reviewed as function changes. Communication between the worker, treating clinicians, occupational health services, rehabilitation professionals, and the employer is important when planning safe and sustainable work. A multidisciplinary and individualized approach may support safer and more sustainable work and may reduce avoidable work disability in selected workers, although intervention results are mixed.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Joshua A. Jogie

Acquisition, analysis, or interpretation of data: Joshua A. Jogie, Victor Coombs, Wayne Ramgoolam, Rondon Ramlal, Sai Sapna Anmolsingh, Ansara Mohammed, Keisha Gangaram, David King, Neera Parsan, Analisa Logie, Bryan Bhagan, Aaron Sirju, Rykel Rojas

Drafting of the manuscript: Joshua A. Jogie

Critical review of the manuscript for important intellectual content: Joshua A. Jogie, Victor Coombs, Wayne Ramgoolam, Rondon Ramlal, Sai Sapna Anmolsingh, Ansara Mohammed, Keisha Gangaram, David King, Neera Parsan, Analisa Logie, Bryan Bhagan, Aaron Sirju, Rykel Rojas

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