Table 1. Predictive factors of burnout in rheumatologists practicing in the Arab countries (multivariable analysis)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income &lt; 10,000 USD/month</td>
<td>2.265</td>
<td>1.006 – 5.098</td>
<td>0.048</td>
</tr>
<tr>
<td>Specialty unsatisfaction</td>
<td>2.036</td>
<td>1.199 – 3.457</td>
<td>0.009</td>
</tr>
<tr>
<td>Age ≤ 44 years</td>
<td>1.921</td>
<td>1.196 – 3.078</td>
<td>0.007</td>
</tr>
<tr>
<td>Receiving phone calls from patients on personal phone</td>
<td>1.616</td>
<td>0.714 – 3.659</td>
<td>0.249</td>
</tr>
<tr>
<td>Infusion center at the rheumatology practice</td>
<td>0.733</td>
<td>0.435 – 1.236</td>
<td>0.733</td>
</tr>
</tbody>
</table>

Figure 1. Venn diagram of the physicians fulfilling the domains of the MBI

Background: Burnout is frequent among physicians and has significant implications for the healthcare system. However, it seems to be underestimated so far among rheumatologists, with few studies indicating a prevalence of 51-57%.

Objectives: To estimate the prevalence and predictors of burnout among rheumatologists practicing in Arab countries.

Methods: A cross-sectional study was conducted by the Arab League of Associations for Rheumatology (ArLAR) Research Group (ARCH) using an anonymous electronic survey developed and tested by a core steering committee and hosted on the Google Forms platform. All rheumatologists practicing in the Arab countries were invited to participate in the e-survey by mass e-mail and via societies’ WhatsApp groups and ArLAR social media accounts. In addition to demographic data, workload, practice profile, and specialty satisfaction (assessed indirectly through choosing another specialty if given a choice), the questionnaire included the Maslach Burnout Inventory (MBI). Rheumatologists were considered as having burnout if at least one of the three MBI domains was positive (Emotional Exhaustion (EE) ≥27, Depersonalization (DP) ≥10, or Personal Accomplishment (PA) ≤33). Factors associated with burnout were analyzed using a multivariable binary logistic regression.

Results: Among 3,227 rheumatologists practicing in Arab countries, 408 responded to the survey, and 394 were included in the final analysis (12.2% of all practicing rheumatologists). The mean age was 45.2 years (SD 11.5), 60.7% were females, the median practice duration was 13 years (IQR 6-22); 49% were from North Africa, 33% were from the Levant, and 18% were from the Gulf. In total, 73% worked full-time, 48% worked in the public sector, 21% in the private sector, and 31% in both; 74% worked in an urban setting only, monthly income was <1,000 USD in 31%, 1,000-1,500 USD in 41%, 5,000-10,000 USD in 9% and >10,000 USD in 8%. The prevalence of burnout among rheumatologists was 61.3%. It was mostly driven by a low PA score (58.1%) (Figure 1). Also, 15.6% had a positive EE score, and 16.6% had a positive DP score. After adjustment for demographics, practice profile, and workload variables, burnout was independently associated with an income <10,000 USD/month (OR 2.268 [95% CI 1.014; 5.01]), unsatisfaction with rheumatology specialty (OR 2.04 [95% CI 1.20; 3.48]) and younger age (OR 1.922 [95% CI 1.20; 3.08]) (Table 1).

Conclusion: The prevalence of burnout among rheumatologists in Arab countries is significantly high and driven mainly by a low personal assessment score. Associated factors were a lower income, lower satisfaction with the specialty, and younger age. Therefore, burnout among rheumatologists needs to be adequately addressed to prevent its negative impact on the healthcare system.

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was found in 48.8%: mild 33%, moderate 8.8%, moderate severe 4%, severe 3%. The mean PHQ-9 score was 5.5±5.3, 46.1% reported anhedonia, 40.7% feeling depressed, sleep alterations 57.2%, fatigue 75.1%, appetite changes 46.1%, thoughts of failure 37%, decreased concentration 50.2%, psychomotor changes 27.9%, thoughts of hurting oneself 9.8%, 8.2% suicidal thoughts and 8.4% low self-esteem. 56.6% had burnout. 14.5% were taking SSRIs/SNRIs and 4% were previously diagnosed. Factors associated with depression were female sex (p=0.008), younger age (p=0.001), administrative duties (p=0.010), annual income less than $25K (p=0.003), low self-esteem (p=0.001), burnout (p=0.001), less satisfaction with career (p=0.001) and lower subjective happiness (p=0.001). Exercise (p=0.035) and practicing academics (p=0.010) were associated with less depression.

Conclusion: Depression affected almost half of the rheumatologists and was more common in females, younger population, with low self-esteem. Lower income, having burnout and less satisfaction with the career were also risk factors. Only a small proportion of the affected population was previously diagnosed and on treatment.

REFERENCE:

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AB1583 ELLATING THE DIRECT EFFECT OF SLE IN THE PRESENCE OF INTERMEDIATE GC ON HEALTHCARE COST

Keywords: Randomized control trial, Health services research, Systemic lupus erythematosus.
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Background: Systemic lupus erythematosus (SLE) is a chronic disease with a broad spectrum of autoantibodies and clinical manifestations. SLE imposes a substantial economic burden on patients and the healthcare system with the estimate of annual healthcare costs for SLE patients of $5,062 in Canada. Besides SLE, post-SLE Glucocorticoid (GC) is often associated with severe infection and mortality, hence increased healthcare costs. One recent study showed that GC users had a total of $17,232 in healthcare costs [1]. However, previous studies did not account properly for GC which acts as a mediator between SLE and healthcare costs. In addition, those studies of the costs due to SLE in Canada estimated the costs of SLE via questionnaire survey with a limited sample size. The use of questionnaires subject to selection bias can either over or underestimate the costs associated with SLE because specific groups (those who don’t have access to questionnaires) are underrepresented. As a result, their conclusions may lack generalizability to all SLE patients. These limitations call for a new approach to account for post-treatment selection bias and a large dataset in the real-world setting to quantify the healthcare costs due to SLE.

Objectives: The objectives of this study are two-fold: 1) to disentangle and quantify the causal annual healthcare costs directly associated with newly diagnosed SLE accounting for GC use; 2) to identify the characteristics of the patients who never took GC (never-users).

Methods: Using linked administrative health data from British Columbia, Canada, we conducted an age- and gender-matched cohort study of all patients with incident SLE between 1997 and 2015. We implemented Principal stratification [2] to identify the annual healthcare costs directly attributed to SLE. Within the strata defined by post-SLE GC use: always-users; never-users, SLE-only users, and non-SLE-only users, we estimated the principal causal effects of SLE on annual healthcare cost. To face identification issues of unobserved principal stratum, estimation was performed with Bayesian Mixture Modelling.

Results: We identified 5,169 SLE patients and matched them with 25,854 non-SLE individuals from the general population. The crude incidence rate ratios for first severe infection and infection-related mortality were 2.59 (95% CI, 2.39-2.80) and 2.20 (95% CI, 1.76-2.73), respectively. The direct annual healthcare cost due to SLE was $1,01k (%95 CI, 0.94-1.10k) which was a weighted average of the cost in always and never-users strata (Figure 1). Always and never users had a total of $17,232 in healthcare costs [1]. However, previous studies did not account properly for GC which acts as a mediator between SLE and healthcare costs. In addition, those studies of the costs due to SLE in Canada estimated the costs of SLE via questionnaire survey with a limited sample size. The use of questionnaires subject to selection bias can either over or underestimate the costs associated with SLE because specific groups (those who don’t have access to questionnaires) are underrepresented. As a result, their conclusions may lack generalizability to all SLE patients. These limitations call for a new approach to account for post-treatment selection bias and a large dataset in the real-world setting to quantify the healthcare costs due to SLE.

Figure 1. Annual health costs in thousand dollars

REFERENCES:

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AB1584 CONSENSUS RECOMMENDATIONS ON THE USE OF BIOSIMILARS IN THE TREATMENT OF INFAMMATORY RHEUMATIC JOINT DISEASES

Keywords: Systematic review, bDMARD, Best practices
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Background: Biosimilars are highly similar to reference products and can help in reducing the financial burden and medication underutilization while still being comparable to reference products in treating rheumatic diseases[1].

Objectives: The objective was to develop evidence-based consensus recommendations and overarching principles aimed at standardizing best practices for the use of biosimilars in treating patients with inflammatory rheumatic joint diseases in the Gulf region.

Methods: A taskforce comprising expert rheumatologists and healthcare economists formulated specific PICO questions on key topics concerning biosimilars: comparability of efficacy, safety and immunogenicity of biosimilars to reference products; extrapolation of indications for biosimilars; switching from reference products to biosimilars or between biosimilars; cost-savings; retention rates; nocebo effect among patients, and general awareness and perceptions of biosimilars in the Gulf region. A systematic literature review was conducted to identify, select, and critically appraise the quality of published evidence that demonstrated the value proposition of biosimilars in rheumatic diseases. Meta-analyses, clinical trials, and systematic reviews of adult patients treated with biosimilars for interventions for prevention, and medical management in this vulnerable patient population. What’s more, when prescribing GC, the treating physicians should pay attention to the patients with with older age, rural residence, higher income and more medical service visits because they are unlikely to adhere to the treatment scheme.