Appendix. Sensitivity analysis: Alternative methods of identifying health literacy,

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Model excluding income and education | Models including income and education |  | Model excluding income and education | Models including income and education |
|  | Summative score, cut-point ≥ 9 |  | Single item, confidence completing scores |
|  | Income below poverty | Low education | Limited health literacy |  | Income below poverty | Low education | Limited health literacy |
| **PROMIS** |  |  |  |  |  |  |  |  |  |
| Physical Function | **-4.2\*\*** | **-3.4 \*** | -1.1 | **-3.4 \*** |  | **-4.6 \*\*** | **-3.1 \*** | -0.8 | **-3.5 \*** |
| Pain Interference† | 3.3  | 2.4 | 2.2 | 2.8 |  | **4.4 \*\*** | 2.1 | 1.9 | **3.2 \*** |
| Fatigue† | 3.3 | 0.4 | -0.4 | 3.5 |  | **3.5 \*** | 0.2 | -0.6 | 3.2 |
| Sleep Disturbance† | **3.3\*** | 1.8 | 1.7 | 2.6 |  | **4.2 \*\*** | 1.4 | 1.3 | **3.5 \*** |
| Sleep Impairment† | **5.2\*** | 3.0 | -0.7 | **4.9 \*** |  | **5.2 \*\*** | 2.6 | -0.9 | **4.4 \*** |
| Cognitive Ability | **-5.8\*\*** | 0.1 | -2.9 | **-5.2 \*\*** |  | **-5.3 \*\*\*** | 0.6 | -2.7 | **-4.8 \*\*** |
| Participation in Social Roles | **-4.2 \*** | **-4.2 \*** | -0.3 | -3.3 |  | **-5.2 \*\*** | -3.7 \* | 0.2 | **-4.4 \*\*** |
| Satisfaction with Discretionary Social Roles | **-6.0\*\*** | -1.9 | 0.4 | **-5.8 \*\*** |  | **-4.0 \*\*** | -1.8 | 0.3 | **-3.6 \*** |
| Satisfaction with Social Roles | **-7.1\*\*** | -2.6 | 0.3 | **-6.8 \*\*** |  | **-5.9 \*\*** | -2.2 | 0.4 | **-5.4 \*\*** |
| Social Isolation† | **4.0 \*** | **5.5 \*\*** | -0.8 | 3.0 |  | **4.9 \*\*** | **5.0 \*\*** | -1.4 | **4.0 \*** |
|  |  |  |  |  |  |  |  |  |  |
| **SF-36** |  |  |  |  |  |  |  |  |  |
| Physical Function | **-5.5 \*\*** | **-4.5 \*\*** | -1.9 | **-4.5 \*** |  | **-5.9 \*\*** | **-4.2 \*** | -0.9 | **-4.4 \*\*** |
| Role Physical | **-4.1 \*** | **-3.5 \*** | -1.2 | -3.4 |  | **-4.9 \*\*** | -3.1 | -0.8 | **-4.0 \*** |
| Pain | -3.2  | -2.2 | -2.8 | -2.4 |  | **-3.5 \*** | -2.0 | -2.6 | -2.4 |
| General Health | **-4.4 \*** | -3.0 | -3.1 | -3.3 |  | **-3.9 \*** | -2.9 | -3.1 | -2.5 |
| Vitality | **-4.5 \*** | -2.8 | -0.9 | -3.9 |  | **-5.3 \*\*** | -2.4 | -0.4 | **-4.6 \*** |
| Social functioning | **-5.8 \*\*** | **-5.0 \*\*** | -0.2 | **-5.0 \*** |  | **-5.1 \*\*** | **-4.8 \*\*** | -0.1 | **-4.0 \*** |
| Role Emotional | **-5.6 \*\*** | **-4.3 \*** | -0.2 | **-4.8 \*** |  | **-7.1 \*\*\*** | **-3.6 \*** | 0.5 | **-6.4 \*\*** |
| Mental Health | **-3.8 \*** | **-5.9 \*\*** | 0.5 | -3.0 |  | **-5.6 \*\*** | **-5.4 \*\*** | 1.2 | **-4.7 \*\*** |
|  |  |  |  |  |  |  |  |  |  |
| **SLE-specific PROs** |  |  |  |  |  |  |  |  |  |
| BILD† | -0.04 | 0.40 | -0.39 | 0.03 |  | -0.1 | 0.4 | -0.4 | -0.1 |
| SLAQ† | **3.2 \*** | 1.7 | 1.4 | **2.7 \*** |  | **3.1 \*\*** | 1.6 | 1.3 | 2.2 \* |
| SLE activity† | **1.2 \*\*\*** | **1.1 \*\*** | 0.8 | 0.8 |  | **0.9 \*** | 1.2 \*\* | 0.8 | 0.4 |

For all scales except those noted by †, lower scores are worse.

Bolded values are significant at p<.05. \* p<.05 \*\*p<.01 \*\*\*p<.0001

All analyses control for age, sex, race/ethnicity, language, missing income, disease duration, SLEDAI (Systemic Lupus Erythmatosus Disease Activity Index), and SDI (Systemic Lupus International Cooperating Clinics/American College of Rheumatology Damage Index)