Supplementary figure 1.



Median and interquartile range (%) for all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for women and men in cohort 1. No significant differences in scores between the two groups were found (p=0.052-0.64).

Supplementary figure 2.



Median and interquartile range (%) for all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for different subtypes of IBS in cohort 1. No significant differences in scores between the subtypes were found (p=0.32-0.64).

**Supplementary table 1. Correlations between IBSQOL and VSI and the four dimensions of WPAI:IBS for both cohort 1 and 2. The mean scores and standard deviations are also reported for the two cohorts.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Absenteeism | Presenteeism | Overall work impairment | Activity impairment | Mean (SD) |
| IBSQOL  Emotional health  Cohort 1  Cohort 2  Mental health  Cohort 1  Cohort 2  Sleep  Cohort 1  Cohort 2  Energy  Cohort 1  Cohort 2  Physical functioning  Cohort 1  Cohort 2  Diet  Cohort 1  Cohort 2  Social role  Cohort 1  Cohort 2  Physical role  Cohort 1  Cohort 2  Sexual relations  Cohort 1  Cohort 2 | -0.290\*\*\*  -0.390\*\*\*  -0.275\*\*\*  -0.315\*  -0.097  -0.319\*  -0.209\*  -0.411\*\*\*  -0.276\*\*\*  -0.299\*  -0.276\*\*\*  -0.178  -0.321\*\*\*  -0.267\*  -0.442\*\*\*  -0.427\*\*\*  -0.083  -0.044 | -0.514\*\*\*  -0.526\*\*\*  -0.518\*\*\*  -0.335\*  -0.275\*\*\*  -0.439\*\*\*  -0.574\*\*\*  -0.556\*\*\*  -0.359\*\*\*  -0.556\*\*\*  -0.388\*\*\*  -0.364\*\*\*  -0.502\*\*\*  -0.368\*\*\*  -0.563\*\*\*  -0.531\*\*\*  -0.231\*  -0.321\* | -0.521\*\*\*  -0.546\*\*\*  -0.524\*\*\*  -0.364\*\*\*  -0.280\*\*\*  -0.501\*\*\*  -0.573\*\*\*  -0.602\*\*\*  -0.420\*\*\*  -0.575\*\*\*  -0.410\*\*\*  -0.380\*\*\*  -0.537\*\*\*  -0.407\*\*\*  -0.636\*\*\*  -0.564\*\*\*  -0.211\*  -0.287\* | -0.540\*\*\*  -0.428\*\*\*  -0.461\*\*\*  -0.357\*\*\*  -0.335\*\*\*  -0.409\*\*\*  -0.574\*\*\*  -0.494\*\*\*  -0.520\*\*\*  -0.558\*\*\*  -0.463\*\*\*  -0.433\*\*\*  -0.527\*\*\*  -0.366\*\*\*  -0.636\*\*\*  -0.564\*\*\*  -0.320\*\*\*  -0.397\*\*\* | 43.4 (21.0)  47.7 (23.8)  66.1 (22.7)  67.3 (25.5)  70.9 (23.3)  71.2 (23.7)  47.4 (26.0)  53.2 (28.9)  68.0 (26.0)  68.9 (26.0)  58.2 (19.7)  59.8 (22.7)  57.0 (24.0)  62.1 (25.2)  53.5 (29.0)  53.0 (31.6)  57.8 (24.7)  61.6 (27.6) |
| VSI  Visceral sensitivity index  Cohort 1  Cohort 2 | 0.237\*\*\*  0.408\*\*\* | 0.458\*\*\*  0.334\* | 0.489\*\*\*  0.424\*\*\* | 0.557\*\*\*  0.228\* | 41.8 (16.4)  42.8 (16.0) |

Spearman’s rho for all four dimensions of the Work Productivity and Activity Impairment: Irritable Bowel Syndrome and the irritable bowel syndrome quality of life questionnaire for patients in cohort 1 and cohort 2. Mean scores and standard deviations are also reported. IBSQOL, the Irritable Bowel Syndrome Quality of Life Questionnaire; VSI, Visceral Sensitivity Index.

\*\*\*p<0.0001

\*\*p=0.003

\*p<0.05

Supplementary figure 3.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with depression scores ≥8 (possible or probable depression) and patients with scores ≤7 (no depression) measured with The Hospital Anxiety and Depression scale in cohort 2. The p-values indicates significant differences in scores between the two groups.

Supplementary figure 4.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with anxiety scores ≥8 (possible or probable anxiety) and patients with scores ≤7 (no anxiety) measured with The Hospital Anxiety and Depression scale in cohort 2. No significant differences in scores between the two groups were found (p= 0.1-0.14).

Supplementary figure 5.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with no/low, medium or high symptom severity measured with Patient Health Questionnaire 15 (PHQ-15) in cohort 2. The brackets and p-values indicates significant differences in scores between different groups.